



Solutions Business Manager Web Services Developer's Guide

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Chapter 1: Preface

This document describes how to use the SBM Application Engine Web Services API. SBM is a Web-architected change request and process management solution that empowers application development teams to improve communication and development processes across the enterprise.

Through the Web services API, you can develop integrations with SBM that create, read, update, and delete primary and auxiliary items within SBM. The Web services API also returns details for states, transitions, projects, tables, fields, users, applications and more.

Audience and Scope

This manual is intended for experienced developers interested in integrating their products with SBM.



Important: Support for development efforts writing Web services is provided by Professional Services. Questions regarding use of Web services operations in orchestration processes as documented are handled by customer support.

Chapter 2: Getting Started

- [About the SBM Application Engine Web Services API \[page 15\]](#)
- [About Web Services \[page 15\]](#)

About the SBM Application Engine Web Services API

With the SBM Application Engine Web Services API you can access key SBM features from your own applications. This enables you to build your own front-end clients for your users' most common tasks, including:

- Submitting items into projects or auxiliary tables
- Transitioning and updating items
- Deleting items
- Viewing item details
- Listing applications and projects
- Finding and running Listing reports

These items can either be project-based primary items or auxiliary items.

About Web Services

Web services are applications that are accessible using standard Internet protocols and formats such as Extensible Markup Language (XML), Hypertext Transfer Protocol (HTTP), or Simple Object Access Protocol (SOAP). You can implement applications that interact with Web services on any platform in any programming language, as long as the language can create and respond to messages that are sent using SOAP over HTTP.

The SBM Application Engine Web Services API is supported on Windows using the IIS Web server for the GSOAP framework.



Note: To use the SBM Web services from Perl, you need Soap::Lite version 0.69 or later.

SOAP Requests

Solutions Business Manager supports the SOAP protocol for calling Web service operations over HTTP or HTTPS. Web service SOAP messages are essentially specially formatted XML data packages sent between a client and a server. The SOAP protocol is popular since it communicates over HTTP, which typically allows access through company firewalls. Since the data is in XML format, different programming languages on different operating systems can send, receive, and process SOAP messages. For detailed information about the SOAP protocol, visit <http://www.w3.org/> and search for SOAP.

SOAP Web services are described via a WSDL file. A WSDL is simply an XML dataset that defines the calls, arguments, and responses in Web service interactions. A WSDL can be imported into a development environment and integrated with an application using a SOAP toolkit. For more information on setting up your development environment to create applications that can send, receive, and process SOAP messages, see [Setting up the Development Environment \[page 17\]](#).

There are two sets of Web service calls (comprised of two separate WSDLs) that are available in SBM: services based on *administrative* functions and services based on *application* or *item* functions.

The URL for SOAP-based Web services that perform functions using primary and auxiliary items and data is: `http://serverName:aePort/gsoap/gsoap_ssl.dll?sbmappservices72`.

The URL for SOAP-based Web services that perform functions for administrative tasks is: `http://serverName:aePort/gsoap/gsoap_ssl.dll?sbmadminservices72`.

A detailed list of all supported SOAP calls can be found in [Application Calls \[page 21\]](#).

Before You Begin

Before you install and use the SBM Application Engine Web Services API, review the following.

System Requirements

The SBM Application Engine Web Services API is supported on Windows operating systems with the Microsoft Internet Information Services (IIS) Web server. For the specific versions that are supported, refer to the *SBM Release Notes*.

Licensing

Use of the SBM Application Engine Web Services API consumes a license. If a user has already checked out a license, an additional license is not checked out for use of the Web services. If the user logs out, but a Web service continues to run for that user, a license is not checked out while the Web service runs.

Security

The SBM Application Engine Web Services API supports the use of HTTPS to connect from the client. Use of SSL (Secure Sockets Layer) is recommended for any customers connecting to their Web services server in a non-secure environment. Using SSL prevents credentials from being extracted from the messages that are sent. IIS should be configured to allow or require SSL to connect to the Web services.

For information on setting up SSL, see the IIS documentation.

Authentication

SBM supports the following authentication types:

- LDAP (Lightweight Directory Access Protocol)
- NT Challenge/Response
- SBM Internal Passwords authentication

Setting up the Development Environment

To create applications that interact with the SBM Web services, you can enable WS-Security in Visual Studio .NET, and then set up Web service stub files.

Using WS-Security with Microsoft Visual Studio .NET

WS-Security (Web Services Security) authentication ensures the identity, integrity, and security of a SOAP message by creating a security token in the SOAP header. The SBM credentials are passed as a username token and a Base64-encoded password.

To implement WS-Security:

1. Download the appropriate version of Microsoft Web Service Enhancements (WSE) from [here](#).
2. After installing the WSE, open your solution in Visual Studio .NET.
3. Right-click your project and select **WSE Settings**.
4. Select the **Enable this project for Web Services Enhancements** check box.
5. Add a Username token that contains the plain text user ID and the Base64-encoded password to the SOAP header.

You can now start building applications using the SBM Web services with WS-Security.

Setting Up Web Service Stub Files

To access the SBM Web services from Visual Studio .NET, you must add references to the WSDL files. When you do this, Visual Studio creates stub classes that your application can use to access the Web service methods. You can create these stub classes for Visual Basic or C#.

Once you have created the stub files, you can update them to use the client protocol provided by the WSE.

To set up the Web service stub files:

1. In Visual Studio .NET, create or open a project.
2. Select Project | Add Web Reference.
3. In the dialog box that appears, enter the URL for either of the SBM Web services in the **URL** field:
 - `http://serverName:aePort/gsoap/sbmappservices72.wsdl`
 - `http://serverName:aePort/gsoap/sbmadminservices72.wsdl`
4. Enter a name in the **Web reference name** field. This name will be used in your code to refer to the web reference.



Tip: The sample programs discussed [Chapter 5: Sample Programs \[page 389\]](#) use `aeWeb` as the web reference name.

5. Click **Add Reference**.

Installing the SBM Web Services API

For on-premise users, the SBM Application Engine Web Services API is installed in the following location on the server that hosts SBM Application Engine:

```
installDirectory\Application Engine\webservices
```

On-Demand users can access the SBM Web services here:

```
https://sbm.serena.com/gsoap/sbmappservices72.wsdl
```

The latest Web services are available from the sbmappservices72 and sbmadmins72 WSDLs. Prior versions including ttwebservices, aewebsservices70, and aewebsservices71 are still compatible and can be used in tandem with SBM Web services version 7.2.

If you are using these earlier versions, consider upgrading in order to take advantage of the expanded identifiers, options, and tighter processing control. To upgrade, update your existing endpoints with the new WSDL name and change the arguments in your existing call list.



Note: If you upgrade to SBM Web services version 7.2, note that Multi-Selection, Multi-User, and Multi-Relational fields no longer accept a comma-separated list of internal (tableid:internal-item-id) values on update. Instead, you must specify values individually in an array of values to update the field. For example:

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>MULTI-RELATIONAL</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
  </urn:id>
  <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
  <urn:setValueMethod>APPEND-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Value1</urn:displayValue>
    <urn:internalName></urn:internalName>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>Value2</urn:displayValue>
    <urn:internalName></urn:internalName>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
```

SBM provides sample programs written in C# that interact with the SBM Web services API. These samples are discussed in more detail in [Chapter 5: Sample Programs \[page 389\]](#).

Web Service and Script Execution Order

The SBM Application Engine executes Web service functions, scripts, transition attribute scripts, transition actions and state actions, and process app events in the following order:

1. Web service function for the pre-transition context
2. Script for the pre-transition context
3. Transition attribute scripts for the pre-transition context
4. Transition executed by users.
5. Script for the post-transition context
6. Transition attribute scripts for the post-transition context
7. Web service function for the post-transition context
8. Script for the post-state context
9. Web Service function for the post-state context
10. Script for the pre-state context
11. Web Service function for pre-state context
12. Transition completed and recorded in the database
13. Transition actions
14. Events are emitted
15. Subtasks and posted items are submitted
16. State actions are performed



Note: An orchestration workflow with a reply is treated the same as a Web service function in terms of when it is executed.

Error Message Logs

All Web service error messages are recorded in the Event Log on the SBM Application Engine server. You can view the messages in the Event Viewer, along with the SBM Web server messages.

If IIS uses Anonymous Access as its authentication model, you must remove the IUSR account from the Guests group and add it to another group (like Users). This enables the Web services API to write messages to the System Event Log.

SOAP Faults

SOAP Faults are generated when there is an error processing a Web service request (also known as a SOAP request). A SOAP Fault consists of three elements:

- `faultcode` – Used by the software making the Web service call to take action based on the type of error that occurred.
- `faultstring` – Contains the human-readable, localized error message.
- `detail` – Contains exception-specific information about the error. The detail section is normally an `AEWebServicesFault` that includes the error message generated by the Web service call.

All Web service calls perform user authentication and license checking. If an error occurs as a result of authenticating a user or allocating a license, a SOAP Fault is returned. A list of the error messages follows:

- `ae:Client.LoginNoConcurrentLicense` – No concurrent licenses available
- `ae:Client.LoginConcurrentExpired` – User had but lost concurrent license
- `ae:Client.LoginServerDown` – LDAP Server Down
- `ae:Client.LoginUserDisabled` – Disabled user account
- `ae:Client.LoginNamespaceDisabled` – Disabled namespace
- `ae:Client.LoginLicenseViolation` – System is in seat license violation
- `ae:Client.LoginInvalidUserCredentials` – Userid or password is invalid

The `faultstring` and `AEWebServicesFault` contain a human-readable, localized error message that can be displayed to users.

Chapter 3: Web Services API Reference

This section provides an overview of all SBM Web services version 7.2 calls, arguments, and responses. For more information on calling out to Web services, see the *SBM System Administrator Guide*.

- [SBM Application Web Services \[page 21\]](#)
- [SBM Administrative Web Services \[page 259\]](#)

SBM Application Web Services

This section contains reference material for all of the SBM Application Web Services (as described in the `sbmappservices72` WSDL).

- [Application Calls \[page 21\]](#)
- [Common Types \[page 92\]](#)
- [Arguments \[page 159\]](#)
- [Responses \[page 189\]](#)

Application Calls

This section describes the Application Web service calls that are available in SBM. These calls represent the Web service operations that are invoked from a client and performed on the SBM Application Engine Web Server. The calls receive one or more arguments from the client, perform an operation on the server, and return an XML response to the client when applicable.

The following table lists all supported calls in alphabetical order, followed by a brief description of each operation. Select a call to view detailed information including:

- **Description** – A brief description of the call.
- **Arguments** – A table that describes the simple and complex types for each argument. For each complex type, click the type name for a detailed description.
- **Response** – A brief description of the call's response. For each response that is a complex type, click the response name for a detailed description.
- **Usage** – Any notes, additional details, and considerations are addressed here.
- **Faults** – Possible error messages are listed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Application Calls

Call	Description
CreateAuxItem [page 25]	This service creates a single auxiliary item within the same table.
CreateAuxItems [page 27]	This service creates multiple auxiliary items within the same table.
CreateFileAttachment [page 30]	This service creates a new file attachment associated with an item.
CreateNoteAttachment [page 32]	This service creates a new note on an existing item.
CreatePrimaryItem [page 34]	This service submits a single primary item within the specified project.
CreatePrimaryItems [page 38]	This service submits multiple primary items within the same project using the data supplied.
DeleteAttachment [page 43]	This service deletes an existing attachment, which can be a note, item link, URL attachment, or file attachment.
DeleteItems [page 44]	This service uses the delete transition to delete multiple items.

Call	Description
DeleteItemsByQuery [page 46]	This service deletes all the items that match the specified <i>where</i> clause.
GetApplications [page 48]	This service returns a list of available applications.
GetAvailableSubmitTransitions [page 49]	This service returns all submit transitions for the specified project.
GetAvailableTransitions [page 50]	This service returns a list of available transitions for the specified item.
GetFieldSelections [page 51]	This service returns the full list of available selections for <i>Single Selection</i> , <i>Multi-Selection</i> , and <i>Binary/Trinary</i> fields.
GetFileAttachment [page 52]	This service gets an existing file attachment.
GetGroupMembers [page 54]	This services returns a list of users who are members of one or more specified groups.
GetItem [page 55]	This service returns a single item, given the table ID and internal item ID.
GetItems [page 56]	This service returns one or more items, given the table ID and internal item ID for each item.
GetItemsByQuery [page 59]	This service returns multiple items found using a <i>where</i> clause and an <i>order by</i> clause to determine the set of items returned.
GetNoteLoggerInfo [page 63]	This service returns the e-mail address of the E-mail Recorder feature.
GetReports [page 63]	This service returns a list of reports within a specified range, limited by one or more optional filters.
GetSolutions [page 66]	This service returns a list of solutions that can be accessed by the user.

Call	Description
GetStateChangeHistory [page 67]	This service returns a specified range of state change history for an item.
GetSubmitProjects [page 68]	This service returns a list of projects into which the user can submit items.
GetTables [page 69]	This service returns a list of tables optionally filtered by solution or table type.
GetUsers [page 71]	This service returns one or more user records.
GetVersion [page 73]	This service returns the SBM version number.
GetWorkflows [page 74]	This service returns data about the graphical workflow diagram.
IsUserValid [page 75]	This service determines whether a specified user is valid or not.
LinkSubtask [page 76]	This service links one item to another to create a subtask relationship.
Logout [page 78]	This service releases any licenses and resources associated with the session.
RunModScript [page 78]	This service executes a specified ModScript.
RunReport [page 80]	This service runs a specified Listing report, given the proper privileges.
RunReportXml [page 82]	This service runs a specified report, given the proper privileges.
UpdateFileAttachment [page 84]	This service updates an existing file attachment for a specified item.
TransitionItem [page 86]	This service transitions an existing item using a specified transition.

Call	Description
TransitionItems [page 88]	This service transitions one or more existing items using a specified transition.

CreateAuxItem

Description

This service creates a single auxiliary item in the specified table.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
table (required)	TableIdentifier [page 126]	Specifies the table where the item is created.
item (required)	TTItem [page 133]	The items to be created. The TTItem types hold the generic data for the item.
options (optional)	ResponseItemOptions [page 175]	Enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned for the item that is specified in the call. The new auxiliary item is returned with updated item data, which shows the unique TS_ID of the record and the TS_ID of the table to which it was added. For more detail, see [TTItemHolder \[page 234\]](#)

Usage

The CreateAuxItem call provides a method to add a new record to a given auxiliary table. If you have the proper privileges, you can add new records to both custom and system auxiliary tables.

To create notes, item links, and URL attachments on the new auxiliary item, add records to the lists that are defined in TTItem. To create a file attachment, see [CreateFileAttachment \[page 30\]](#).



Tip: You must have the table ID and item ID of the auxiliary item prior to attaching a file to the item because the IDs are required in the ItemIdentifier argument of CreateFileAttachment.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **sections** and **specifiedSections** — Enables you to specify which parts of an item should be returned. This allows you to limit the data that is returned for a given item. The sections that aren't specified are not included in the response. For example, if the items you are creating have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use the sections parameter to return only the sections of an item you want.
- **limitedField** — Enables you to specify which fields you want returned in the response.

For more information on the options elements, see [ResponseItemOptions \[page 175\]](#).

Faults

- Invalid database pointer.
- The table ID is not valid.
- The user lacks sufficient permission.
- Creating the record fails.
- Reading the item fails.

XML

The following XML is a snippet of the payload that is sent with CreateAuxItem.

```
<urn:CreateAuxItem>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:table>
    <urn:displayName></urn:displayName>
    <urn:id>1004</urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
  </urn:table>
  <urn:item>
    <urn:id>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:tableId></urn:tableId>
      <urn:tableIdItemId></urn:tableIdItemId>
      <urn:issueId></urn:issueId>
    </urn:id>
    <urn:itemType></urn:itemType>
    <urn:title>New Aux Item 1</urn:title>
    <urn:description></urn:description>
    <urn:subtasks/>
  </urn:item>
</urn:CreateAuxItem>
```

```

    <urn:extendedField>
      <urn:id>
        <urn:displayName>Field Name</urn:displayName>
        <urn:id>153</urn:id>
        <urn:uuid></urn:uuid>
        <urn:dbName>FIELD_NAME</urn:dbName>
      </urn:id>
      <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
      <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
      <urn:value>
        <urn:displayValue>test text</urn:displayValue>
        <urn:internalValue></urn:internalValue>
        <urn:uuid></urn:uuid>
      </urn:value>
    </urn:extendedField>
  </urn:item>
  <urn:options>
    <urn:extraOption>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:extraOption>
    <urn:sections>SECTIONS-SPECIFIED</urn:sections>
    <urn:specifiedSections>SECTION:FIXED,SECTION:EXTENDED</urn:specifiedSections>
    <urn:limitedField></urn:limitedField>
  </urn:options>
</urn:CreateAuxItem>

```

CreateAuxItems

Description

This service creates one or more auxiliary items within the same table.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
table (required)	TableIdentifier [page 126]	Specifies the table where the item or items are created.
item (required)	TTItem [page 133]	The list of items that are created. The TTItem types hold the generic data for each item.

Argument	Type	Description
options (optional)	MultipleResponseItemOptions [page 166]	Specifies whether the service should continue if an error is encountered, or stop. Also enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned, one for each item that is specified in the call. The new auxiliary items are returned with updated item data, which shows the unique TS_IDs of each record and TS_IDs of the table to which they were added. For more detail, see [TTItemHolder \[page 234\]](#)

Usage

The CreateAuxItems call provides a method to add new records to a given auxiliary table. If you have the proper privileges, you can add new records to both custom and system auxiliary tables.

To create notes, item links, and URL attachments on the new auxiliary items, add records to the lists that are defined in TTItem. To create a file attachment, see [CreateFileAttachment \[page 30\]](#).



Tip: You must have the table ID and item ID of the auxiliary item prior to attaching a file to the item because the IDs are required in the ItemIdentifier argument of CreateFileAttachment.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all items have been processed.
- **sections** and **specifiedSections** – Enables you to specify which parts of an item should be returned. This allows you to limit the data that is returned for a given item. The sections that aren't specified are not included in the response. For example, if the items you are creating have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use the sections parameter to return only the sections of an item you want.
- **limitedField** – Enables you to specify which fields you want returned in the response. For example, you can specify one or more fields to limit a service response to return only the fields that you want returned.

For more information on the options elements, see [MultipleResponseItemOptions \[page 166\]](#).

Faults

- Invalid database pointer.
- The table ID is not valid.

-
- The user lacks sufficient permission.
 - Creating the record fails.
 - Reading the item fails.

XML

The following XML is a snippet of the payload that is sent with CreateAuxItems.

```
<urn:CreateAuxItems>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:table>
    <urn:displayName></urn:displayName>
    <urn:id>1004</urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
  </urn:table>
  <urn:item>
    <urn:id>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:tableId></urn:tableId>
      <urn:tableIdItemId></urn:tableIdItemId>
      <urn:issueId></urn:issueId>
    </urn:id>
    <urn:itemType></urn:itemType>
    <urn:title>New Aux Item 1</urn:title>
    <urn:description></urn:description>
    <urn:subtasks/>
    <urn:extendedField>
      <urn:id>
        <urn:displayName>Field Name</urn:displayName>
        <urn:id>153</urn:id>
        <urn:uuid></urn:uuid>
        <urn:dbName>FIELD_NAME</urn:dbName>
      </urn:id>
      <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
      <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
      <urn:value>
        <urn:displayValue>test text</urn:displayValue>
        <urn:internalValue></urn:internalValue>
        <urn:uuid></urn:uuid>
      </urn:value>
    </urn:extendedField>
  </urn:item>
  <urn:item>
    <urn:id>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
```

```

        <urn:uuid></urn:uuid>
        <urn:tableId></urn:tableId>
        <urn:tableIdItemId></urn:tableIdItemId>
        <urn:issueId></urn:issueId>
    </urn:id>
    <urn:itemType></urn:itemType>
    <urn:title>New Aux Item 2</urn:title>
    <urn:description></urn:description>
    <urn:extendedField>
        <urn:id>
            <urn:displayName>Field Name</urn:displayName>
            <urn:id>153</urn:id>
            <urn:uuid></urn:uuid>
            <urn:dbName>FIELD_NAME</urn:dbName>
        </urn:id>
        <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
        <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
        <urn:value>
            <urn:displayValue>test text</urn:displayValue>
            <urn:internalValue></urn:internalValue>
            <urn:uuid></urn:uuid>
        </urn:value>
    </urn:extendedField>
</urn:item>
<urn:options>
    <urn:extraOption>
        <urn:name></urn:name>
        <urn:value></urn:value>
    </urn:extraOption>
    <urn:sections>SECTIONS-SPECIFIED</urn:sections>
    <urn:specifiedSections>SECTION:FIXED,SECTION:EXTENDED</urn:specifiedSections>
    <urn:limitedField></urn:limitedField>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>
</urn:CreateAuxItems>

```


CreateFileAttachment

Description

This service creates a new file attachment associated with an item.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
item (required)	ItemIdentifier [page 108]	Specifies the item that receives the new file attachment.
attachmentContents (required)	FileAttachmentContents [page 103]	The file attachment details and content.  Note: attachmentContents is of type FileAttachmentContents, but also includes attachment detail found in FileAttachment. The XML example below shows the parameters from both FileAttachment and FileAttachmentContents. See FileAttachment [page 101] for more information.
options (optional)	Options [page 171]	Holds name value pairing for future arguments.

Response

FileAttachment is returned. The newly added file attachment details are returned (not the content itself). For more detail, see [FileAttachment \[page 101\]](#).

Usage

The CreateFileAttachment call provides a method to add a single attachment to an auxiliary or primary item, given the proper privileges. If the call fails, a file attachment will not be added. To create multiple file attachments for a single item, CreateFileAttachment must be called for each attachment. You must have the table ID and item ID of the auxiliary or primary item prior to calling CreateFileAttachment because the IDs are required in the ItemIdentifier argument.



Note: The file to be attached is sent as a base64 encoded attachment.

Faults

- Invalid database pointer.
- The item ID is not valid.
- The user lacks sufficient permission.
- Creating the record fails.
- Failed to create the attachment.

XML

The following XML is a snippet of the payload that is sent with CreateFileAttachment.

```

<urn:CreateFileAttachment>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:item>
    <urn:displayName></urn:displayName>
    <urn:id>109</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId></urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:item>
  <urn:attachmentContents>
    <urn:id>16</urn:id>
    <urn:name>pdf_doc</urn:name>
    <urn:fileName>relnotes.pdf</urn:fileName>
    <urn:showAsImage>false</urn:showAsImage>
    <urn:modificationDateTime></urn:modificationDateTime>
    <urn:url></urn:url>
    <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
    <urn:contentsBase64>
      <urn:data>cid:981662964041</urn:data>
    </urn:contentsBase64>
  </urn:attachmentContents>
</urn:CreateFileAttachment>

```

CreateNoteAttachment

Description

This service creates a new note attachment in an existing item.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
item (required)	ItemIdentifier [page 108]	Specifies the item that receives the new note.
author (optional)	UserIdentifier [page 157]	Indicates the author of the note.

Argument	Type	Description
noteContents (required)	NoteAttachmentContents [page 170]	Holds the time, title, content, and access-type for the note.

Response

A boolean is returned. True indicates the note was created successfully; false indicates the note was not created:

```
<ae:CreateNoteAttachmentResponse>
  <ae:return>>true</ae:return>
</ae:CreateNoteAttachmentResponse>
```

To verify the contents of the note, view the `<ae:note>` element in the TTIItem response of the GetItem call.

Usage

The CreateNoteAttachment call provides a method to add a single note to an auxiliary or primary item, given the proper privileges. If the call fails, the note is not be added. To create multiple notes for a single item, you must call CreateNoteAttachment for each note. You must have the table ID and item ID of the auxiliary or primary item prior to calling CreateNoteAttachment because the IDs are required in the ItemIdentifier argument.

Faults

- Invalid database pointer.
- The item ID is not valid.
- The user lacks sufficient permission.
- Creating the record fails.
- Failed to create the note.

XML

The following XML is a snippet of the payload that is sent with CreateNoteAttachment.

```
<urn:CreateNoteAttachment>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:item>
    <urn:displayName></urn:displayName>
    <urn:id>142</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId></urn:tableIdItemId>
```

```

    <urn:issueId></urn:issueId>
  </urn:item>
  <urn:author>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:author>
  <urn:noteContents>
    <urn:time></urn:time>
    <urn:title>Note Title</urn:title>
    <urn:body>This is a note.</urn:body>
    <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
  </urn:noteContents>
</urn>CreateNoteAttachment>

```

CreatePrimaryItem

Description

This service creates a single primary item within the same project using the data that is supplied.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
project (required)	ProjectIdentifier [page 114]	The project in which the new item will be created. You must at least specify the TS_ID of the project.
parentItem	ItemIdentifier [page 108]	If specified, the item that is created using CreatePrimaryItem will become a sub-item of this item.
item (required)	TTItem [page 133]	Holds one the item to be created. The TTItem type holds the generic data for the item.
submitTransition (optional)	TransitionIdentifier [page 128]	Only used if you want to use an alternate submit transition.
options (optional)	ResponseItemOptions [page 175]	Enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned for the item that is specified in the call. The new primary item is returned with updated item data, which shows the unique TS_ID of the record and the TS_ID of the table to which it was added. For more detail, see [TTItemHolder \[page 234\]](#).

Usage

The CreatePrimaryItem call provides a method to add a single new record to a given primary table. You can add new records to both custom and system primary tables, given the proper privileges.

To create notes, item links, and URL attachments on the new primary item, add records to these elements as defined in TTItem. To create a file attachment, see [CreateFileAttachment \[page 30\]](#).



Tip: You must have the table ID and item ID of the primary item prior to attaching a file to the item because the IDs are required in the ItemIdentifier argument of CreateFileAttachment.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **sections** and **specifiedSections** – Enables you to specify which parts of an item should be returned. This allows you to limit the data that is returned for a given item. The sections that aren't specified are not included in the response. For example, if the items you are creating have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use the sections parameter to return only the sections of an item you want.
- **limitedField** – Enables you to specify which fields you want returned in the response.

For more information on the options elements, see [ResponseItemOptions \[page 175\]](#).

Faults

- Invalid database pointer.
- The project ID is not valid.
- The user lacks sufficient permission.
- Creating the record fails.
- The submit transition fails.
- Validation constraint violation: data type mismatch in element

XML

The following XML is a snippet of the payload that is sent with CreatePrimaryItem.

```
<urn:CreatePrimaryItem>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
```

```
</urn:auth>
<urn:project>
  <urn:displayName>Animation Pro</urn:displayName>
  <urn:id>2</urn:id>
  <urn:uuid></urn:uuid>
  <urn:fullyQualifiedName>Base Project||Base IDT Project||
  Software Development||Animation Pro</urn:fullyQualifiedName>
</urn:project>
<urn:parentItem>
</urn:parentItem>
<urn:item>
  <urn:id>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId></urn:tableId>
    <urn:tableIdItemId></urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:id>
  <urn:itemType></urn:itemType>
  <urn:project>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:project>
  <urn:title>Test item</urn:title>
  <urn:description>This is a test item.</urn:description>
  <urn:createdBy>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:createdBy>
  <urn:createDate></urn:createDate>
  <urn:modifiedBy>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:modifiedBy>
  <urn:modifiedDate></urn:modifiedDate>
  <urn:activeInactive></urn:activeInactive>
  <urn:state>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:isClosed></urn:isClosed>
  </urn:state>
  <urn:owner>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:owner>
```

```

<urn:url/>
<urn:subtasks/>
<urn:extendedField>
  <urn:id>
    <urn:displayName>Severity</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SEVERITY</urn:dbName>
  </urn:id>
  <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Critical</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>How Found</urn:displayName>
    <urn:id>74</urn:id>
    <urn:uuid>b999082f-ef27-47c9-890f-b4d80a3c4c23</urn:uuid>
    <urn:dbName>HOW_FOUND</urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Code Review</urn:displayValue>
    <urn:internalValue>24</urn:internalValue>
    <urn:uuid>931259b4-dc0a-46c5-b567-ff04dd5c9395</urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedData>
  <urn:data>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:data>
</urn:extendedData>
</urn:item>
<urn:submitTransition>
  <urn:displayName></urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:submitTransition>
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:sections>SECTIONS-ALL</urn:sections>
  <urn:specifiedSections></urn:specifiedSections>
  <urn:limitedField/>
</urn:options>
</urn:CreatePrimaryItem>

```

CreatePrimaryItems

Description

This service creates one or more primary items within the same project using the data that is supplied.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
project (required)	ProjectIdentifier [page 114]	The project in which new items are created. You must at least specify the TS_ID of the project.
parentItem	ItemIdentifier [page 108]	If specified, items that are created using CreatePrimaryItems will become sub-items of this item.
item (required)	TTItem [page 133]	Holds one or more items to be created. The TTItem type holds the generic data for each item.
submitTransition (optional)	TransitionIdentifier [page 128]	Only used if you want to use an alternative submit transition.
options (optional)	MultipleResponseItemOptions [page 166]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned, one for each item that is specified in the call. The new primary items are returned with updated item data, which shows the unique TS_IDs of each record and TS_IDs of the table to which they were added. For more detail, see [TTItemHolder \[page 234\]](#).

Usage

The CreatePrimaryItems call provides a method to add multiple new records to a given primary table. You can add new records to both custom and system primary tables, given the proper privileges.

To create notes, item links, and URL attachments on the new primary items, add records to these elements as defined in TTIItem. To create a file attachment, see [CreateFileAttachment \[page 30\]](#).



Tip: You must have the table ID and item ID of the primary item prior to attaching a file to the item because the IDs are required in the ItemIdentifier argument of CreateFileAttachment.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all items have been processed.
- **sections** and **specifiedSections** – Enables you to specify which parts of an item should be returned. This allows you to limit the data that is returned for a given item. The sections that aren't specified are not included in the response. For example, if the items you are creating have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use the sections parameter to return only the sections of an item you want.
- **limitedField** – Enables you to specify which fields you want returned in the response. For example, you can specify one or more fields to limit a service response to return only the fields that you want returned.

For more information on the options elements, see [MultipleResponseItemOptions \[page 166\]](#).

Faults

- Invalid database pointer.
- The project ID is not valid.
- The user lacks sufficient permission.
- Creating the record fails.
- The submit transition fails.
- Validation constraint violation: data type mismatch in element

XML

The following XML is a snippet of the payload that is sent with CreatePrimaryItems.

```
<urn:CreatePrimaryItems>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:project>
```

```
<urn:displayName>Animation Pro</urn:displayName>
<urn:id>2</urn:id>
<urn:uuid></urn:uuid>
<urn:fullyQualifiedName>Base Project||Base IDT Project||
Software Development||Animation Pro</urn:fullyQualifiedName>
</urn:project>
<urn:parentItem>
</urn:parentItem>
<urn:item>
  <urn:id>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId></urn:tableId>
    <urn:tableIdItemId></urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:id>
  <urn:itemType></urn:itemType>
  <urn:project>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:project>
  <urn:title>Test item</urn:title>
  <urn:description>This is a test item.</urn:description>
  <urn:createdBy>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:createdBy>
  <urn:createDate></urn:createDate>
  <urn:modifiedBy>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:modifiedBy>
  <urn:modifiedDate></urn:modifiedDate>
  <urn:activeInactive></urn:activeInactive>
  <urn:state>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:isClosed></urn:isClosed>
  </urn:state>
  <urn:owner>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:owner>
  <urn:url/>
  <urn:subtasks/>
```

```

<urn:extendedField>
  <urn:id>
    <urn:displayName>Severity</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SEVERITY</urn:dbName>
  </urn:id>
  <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Critical</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>How Found</urn:displayName>
    <urn:id>74</urn:id>
    <urn:uuid>b999082f-ef27-47c9-890f-b4d80a3c4c23</urn:uuid>
    <urn:dbName>HOW_FOUND</urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Code Review</urn:displayValue>
    <urn:internalValue>24</urn:internalValue>
    <urn:uuid>931259b4-dc0a-46c5-b567-ff04dd5c9395</urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedData>
  <urn:data>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:data>
</urn:extendedData>
</urn:item>
<urn:item>
  <urn:id>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId></urn:tableId>
    <urn:tableIdItemId></urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:id>
  <urn:itemType></urn:itemType>
  <urn:project>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
  </urn:project>
  <urn:title>Test item</urn:title>
  <urn:description>This is a second test item.</urn:description>

```

```
<urn:createdBy>
  <urn:displayName></urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
  <urn:loginId></urn:loginId>
</urn:createdBy>
<urn:createDate></urn:createDate>
<urn:modifiedBy>
  <urn:displayName></urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
  <urn:loginId></urn:loginId>
</urn:modifiedBy>
<urn:modifiedDate></urn:modifiedDate>
<urn:activeInactive></urn:activeInactive>
<urn:state>
  <urn:displayName></urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
  <urn:isClosed></urn:isClosed>
</urn:state>
<urn:owner>
  <urn:displayName></urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
  <urn:loginId></urn:loginId>
</urn:owner>
<urn:url/>
<urn:subtasks/>
<urn:extendedField>
  <urn:id>
    <urn:displayName>Severity</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SEVERITY</urn:dbName>
  </urn:id>
  <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Critical</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>How Found</urn:displayName>
    <urn:id>74</urn:id>
    <urn:uuid>b999082f-ef27-47c9-890f-b4d80a3c4c23</urn:uuid>
    <urn:dbName>HOW_FOUND</urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Code Review</urn:displayValue>
```

```

        <urn:internalValue>24</urn:internalValue>
        <urn:uuid>931259b4-dc0a-46c5-b567-ff04dd5c9395</urn:uuid>
    </urn:value>
</urn:extendedField>
<urn:extendedData>
    <urn:data>
        <urn:name></urn:name>
        <urn:value></urn:value>
    </urn:data>
</urn:extendedData>
</urn:item>
<urn:submitTransition>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
</urn:submitTransition>
<urn:options>
    <urn:extraOption>
        <urn:name></urn:name>
        <urn:value></urn:value>
    </urn:extraOption>
    <urn:sections>SECTIONS-ALL</urn:sections>
    <urn:specifiedSections></urn:specifiedSections>
    <urn:limitedField/>
    <urn:multiOption>STOP-ON-FAILURE</urn:multiOption>
</urn:options>
</urn>CreatePrimaryItems>

```

DeleteAttachment

Description

This service deletes an existing attachment, which can be a note, item link, URL attachment, or file attachment.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
attachmentID (required)	integer	This is the internal TS_ID of the attachment from the TS_ATTACHMENTS table.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

An empty XML response is returned and the specified note, item link, URL, or file attachment is deleted:

```
<ae:DeleteAttachmentResponse></ae:DeleteAttachmentResponse>
```

Usage

You can use [GetItems \[page 56\]](#) to find the TS_ID of the attachment to be deleted. If the item has any attachments, they are listed in the `<ae:note>`, `<ae:itemLink>`, `<ae:urlAttachment>`, or `<ae:fileAttachment>` parameters.

Faults

- Invalid database pointer.
- The attachment ID is not valid.
- Creating the record fails.
- The user lacks sufficient permission.
- Failed to delete the attachment.

XML

The following XML is a snippet of the payload that is sent with DeleteAttachment.

```
<urn:DeleteAttachment>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:attachmentID>47</urn:attachmentID>
</urn:DeleteAttachment>
```

DeleteItems

Description

This service uses the delete transition to delete multiple items.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
itemID (required)	ItemIdentifier [page 108]	The item or items that you want to delete.
options	MultipleOptions [page 165]	Holds name value pairing for future elements and enumeration to determine if the service should stop on failure and send an error message or continue processing.

Response

An empty XML response is returned and the items are deleted using the default delete transition. Failure will not delete items.

```
<ae:DeleteItemsResponse></ae:DeleteItemsResponse>
```

Usage

This call permanently deletes the primary or auxiliary items you specify. Any items referring to these items will be reduced or set to (None). All items in the list are processed. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all items have been processed.

Faults

- Invalid database pointer.
- The item ID is not valid.
- The user lacks sufficient permission.
- The delete transition fails to execute.

XML

The following XML is a snippet of the payload being sent with DeleteItems.

```
<urn:DeleteItems>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:itemId>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId></urn:tableId>
    <urn:tableIdItemId>1000:153</urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:itemId>
</urn:itemId>
```

```

    <urn:displayName></urn:displayName>
    <urn:id>154</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId></urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:itemId>
</urn:options>
  <urn:extraOption></urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>
</urn>DeleteItems>

```

DeleteItemsByQuery

Description

This service deletes all the items that match the specified *where* clause.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
table (required)	TableIdentifier [page 126]	Specifies the table in which items are deleted.
queryWhereClause (required)	string	An SQL statement to find items with <i>TS_ID</i> >0. Sending an empty <i>where</i> clause will delete all items.
options	MultipleOptions [page 165]	Holds name value pairing for future elements and enumeration to determine if the service should stop on failure and send an error message or continue processing.

Response

An empty XML response is returned and the items are deleted using the default delete transition. Failure will not delete items.

```
<ae>DeleteItemByQueryResponse></ae>DeleteItemsByQueryResponse>
```

Usage

This call permanently deletes the primary or auxiliary items you specify. Any items referring to these items will be reduced or set to (None). The items that are deleted are determined via the table and *where* clause.



Note: You need only pass the conditions in the *where* clause itself. For example:

```
<urn:queryWhereClause>TS_ISSUEID LIKE '00106' OR TS_ISSUEID LIKE '00029'  
OR TS_ISSUEID LIKE '00105'</urn:queryWhereClause>
```

```
<urn:queryWhereClause>TS_ISSUEID='00038'</urn:queryWhereClause>
```

```
<urn:queryWhereClause>TS_ID='4'</urn:queryWhereClause>
```

To delete all items, send a null query:

```
<urn:queryWhereClause></urn:queryWhereClause>
```

Faults

- Invalid database pointer.
- The table ID is not valid.
- The user lacks sufficient permission.
- The delete transition fails to execute.

XML

The following XML is a snippet of the payload that is sent with DeleteItemsByQuery.

```
<urn:DeleteItemsByQuery>  
  <urn:auth>  
    <urn:userId>admin</urn:userId>  
    <urn:password></urn:password>  
    <urn:hostname></urn:hostname>  
  </urn:auth>  
  <urn:table>  
    <urn:displayName></urn:displayName>  
    <urn:id>1000</urn:id>  
    <urn:uuid></urn:uuid>  
    <urn:dbName></urn:dbName>  
  </urn:table>  
  <urn:queryWhereClause>TS_ISSUEID LIKE '000208' OR TS_ISSUEID LIKE '000209'  
OR TS_ISSUEID LIKE '000210'</urn:queryWhereClause>  
  <urn:options>  
    <urn:extraOption></urn:extraOption>  
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>  
  </urn:options>  
</urn:DeleteItemsByQuery>
```

GetApplications

Description

This service returns identification information for available applications in an SBM Application Engine database.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
options	Options [page 171]	Holds name value pairing for future arguments on certain calls.

Response

ApplicationData (a list of applications) is returned in the response. Each return element shows the *ApplicationIdentifier*, the description, the application definition UUID, and the revision number. See [ApplicationData \[page 193\]](#) for more information.

Usage

Use *GetApplications* to return the available applications and information about each revision. This information is useful when you need to retrieve historical information about deployed applications.

Faults

- Invalid database pointer.
- No applications are available for the user.

XML

The following XML is a snippet of the payload that is sent with *GetApplications*.

```
<urn:GetApplications>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:options>
    <urn:extraOption>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:extraOption>
  </urn:options>
</urn:GetApplications>
```

GetAvailableSubmitTransitions

Description

This service returns all submit transitions for the specified project.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
project (required)	ProjectIdentifier [page 114]	Specifies the project for which all available submit transitions are returned.
attributename (optional)	string	Returns only transitions that have this transition attribute (see <i>TS_TRANSATTRS</i> for selections). This argument is only used for transitions created via an integration.
options	Options [page 171]	Holds name value pairing for future arguments on certain calls.

Response

One or more transitions is returned, though the list can be empty. See the [Transition \[page 232\]](#) type for more detail.

Usage

The transition or transitions returned is limited by the project you specify.

Faults

- Invalid database pointer.
- The project ID is not valid.
- Reading transition attribute fails.

XML

The following XML is a snippet of the payload being sent with `GetAvailableSubmitTransitions`.

```
<urn:GetAvailableSubmitTransitions>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:projectId>6</urn:projectId>
```

```
<urn:attributeName></urn:attributeName>
</urn:GetAvailableSubmitTransitions>
```

GetAvailableTransitions

Description

This service returns a list of available transitions for the specified item. That list can be filtered to include only the transitions that have the specified attribute.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
item (required)	ItemIdentifier [page 108]	Specifies the item for which available transitions are returned.
transitionOptions	GetTransitionOptions [page 163]	Indicates the type of transitions to return. If empty or TRANSITIONS-ALL is specified, all transition types are returned. Specify TRANSITIONS-QUICK to return only quick transitions.
attributeName (optional)	string	Returns only transitions that have this transition attribute (see TS_TRANSATTRS for selections). This argument is only used for transitions created via an integration.
options	Options [page 171]	Holds name value pairing for future arguments on certain calls.

Response

One or more transitions are returned, though the list can be empty. See the [Transition \[page 232\]](#) type for more detail.

Usage

The transition or transitions returned are limited by the item you specify. Only transitions available to the user are returned.

Faults

- Invalid database pointer.
- The item ID is not valid.
- Reading transition attribute fails.

XML

The following XML is a snippet of the payload that is sent with `GetAvailableTransitions`.

```
<urn:GetAvailableTransitions>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:item>
    <urn:displayName></urn:displayName>
    <urn:id>25</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableItemId></urn:tableItemId>
    <urn:issueId></urn:issueId>
  </urn:item>
  <urn:transitionOptions>TRANSITIONS-ALL</urn:transitionOptions>
  <urn:attributeName></urn:attributeName>
</urn:GetAvailableTransitions>
```

GetFieldSelections

Description

This service returns the full list of available selections for single and multi-selection fields.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
field (required)	FieldIdentifier [page 99]	The field for which selections should be returned.
project (optional)	ProjectIdentifier [page 114]	The project that contains the field.

Response

`FieldSelectionsHolder` is returned, one for each field that is specified in the call. For each field, the unique `FieldIdentifier`, field selection type, field attributes, and options are returned. For more detail, see [FieldSelectionsHolder](#) [page 197].

Usage

The `GetFieldSelections` call enables you to see the list of available field selections for *Single Selection*, *Multi-Selection*, and *Binary/Tertiary* fields on a primary item.

Only *Single Selection*, *Multi-Selection*, and *Binary/Tertiary* field types can be used with the `GetFieldSelections` call.

You will typically use the `GetItem` call first to retrieve a list of `FieldIdentifiers` for the *Single Selection*, *Multi-Selection*, and *Binary/Tertiary* fields on an item, and then specify those `FieldIdentifiers` in the `GetFieldSelections` call.

Faults

- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload that is sent with `GetFieldSelections`.

```
<urn:GetFieldSelections>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:field>
    <urn:dbName>ACTIVEINACTIVE</urn:dbName>
  </urn:field>
  <urn:field>
    <urn:dbName>PRIORITY</urn:dbName>
  </urn:field>
  <urn:field>
    <urn:dbName>FUNCTIONAL_AREAS</urn:dbName>
  </urn:field>
  <urn:project>
    <urn:displayName>IDM Project</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
    <urn:internalName></urn:internalName>
  </urn:project>
</urn:GetFieldSelections>
```

GetFileAttachment

Description

This service gets an existing file attachment.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <code>userId</code> and <code>password</code> can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
item (required)	ItemIdentifier [page 108]	Specifies the item that contains the attachment.
attachmentID (required)	integer	This is the internal TS_ID of the attachment from the TS_ATTACHMENTS table.
options	Options [page 171]	Holds name value pairing for future arguments on certain calls.

Response

FileAttachmentContents is returned. The file attachment is returned as a base64 encoded attachment. See [FileAttachmentContents](#) [\[page 103\]](#) for more information.

Usage

You can use the ID returned in the FileAttachment parameter of a returned TTIItem in the attachmentID argument of GetFileAttachment.

Faults

- Invalid database pointer.
- The item ID is not valid.
- The user lacks sufficient permission.
- Creating the record fails.
- The attachment ID is not valid.
- Failed to read the attachment contents.

XML

The following XML is a snippet of the payload being sent with GetFileAttachment.

```
<urn:GetFileAttachment>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:item>
    <urn:displayName></urn:displayName>
    <urn:id>109</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:109</urn:tableIdItemId>
    <urn:issueId>BUG000173</urn:issueId>
  </urn:item>
  <urn:attachmentID>104</urn:attachmentID>
</urn:GetFileAttachment>
```

GetGroupMembers

Description

This service returns a list of users who are members of one or more specified groups.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
group	GroupIdentifierEx [page 106]	Used to specify one or more group identifiers.

Response

One or more [GroupMembersHolder \[page 205\]](#) responses are returned. The users are returned in the context of the specified group. For more information, see [GroupMembersHolder \[page 205\]](#).

Usage

The `<urn:group>` parameter uniquely identifies the group.

You must have administrative privileges to execute this call and return results.

Faults

- An empty groups list was passed
- The specified group id or name `<input value>` does not exist. (Appears if an invalid group identifier is specified)
- User `<name>` does not have privilege to view group 'any'

XML

The following XML is a snippet of the payload that is sent with GetGroupMembers.

```
<urn:GetGroupMembers>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:id>
      <urn:displayName>IDM Manager</urn:displayName>
    </urn:id>
  </urn:group>
</urn:GetGroupMembers>
```

GetItem

Description

This service returns a single item, given the table ID and item ID.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
itemId (required)	ItemIdentifier [page 108]	The item that should be returned.
options (optional)	ResponseItemOptions [page 175]	Enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned for the item that is specified in the call. The *itemIdIdentifier*, which shows the unique *TS_ID* for the record and *TS_ID* of the table to which it belongs is displayed. For more detail, see [TTItemHolder \[page 234\]](#).

Usage

The GetItem call enables you to see a snapshot of an auxiliary or primary item, without invoking any actual changes against the specified item. To return results, you must provide the table ID and either one of the elements in the *itemIdIdentifier* or the *issueId* for the item.

You can use the following elements in the options argument to control the service handling and response:

- **sections** and **specifiedSections** – Use these elements to specify which parts of an item should be returned in order to limit the data that is returned for a given item. The sections that are not specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want.
- **limitedField** – Use the *limitedField* element to specify specific fields to control the item data that is returned. For example, you can specify one or more fields to limit a service response to return only the fields that you want returned.

For more information on the options elements, see [ResponseItemOptions \[page 175\]](#).

Faults

- The *issueId* = '<issue id>' provided is not unique for table '<database table name>'
- Invalid item id 0 for table 0.

- The item ID is not valid.
- The user lacks sufficient permission.
- Validation constraint violation: data type mismatch.

XML

The following XML is a snippet of the payload that is sent with GetItem.

```
<urn:GetItem>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
    <urn:extendedData>
      <urn:data>
        <urn:name></urn:name>
        <urn:value></urn:value>
      </urn:data>
    </urn:extendedData>
  </urn:auth>
  <urn:itemId>
    <urn:displayName>BUG000164</urn:displayName>
    <urn:id>106</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:106</urn:tableIdItemId>
    <urn:issueId>000164</urn:issueId>
  </urn:itemId>
  <urn:options>
    <urn:extraOption>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:extraOption>
    <urn:sections>SECTIONS-SPECIFIED</urn:sections>
    <urn:specifiedSections>SECTION:FIXED</urn:specifiedSections>
    <urn:limitedField>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:dbName></urn:dbName>
    </urn:limitedField>
  </urn:options>
</urn:GetItem>
```

GetItems

Description

This service returns one or more items, given the table ID and internal item ID for each item.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
itemId (required)	ItemIdentifier [page 108]	The item or items that should be returned.
options (optional)	MultipleResponseItemOptions [page 166]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned, one for each item that is specified in the call. The *itemIdentifiers*, which show the unique *TS_ID* for each record and *TS_ID* of the table to which they belong is displayed. For more detail, see [TTItemHolder \[page 234\]](#).

Usage

The *GetItems* call enables you to see a snapshot of one or more auxiliary or primary items, without invoking any actual changes against the specified items. Specify the items that you want to return in one or more *itemId* arguments. To return results, you must provide the table ID and either one of the elements in the *itemIdentifier* or the *issueId* for each item.

You can use the following elements in the options argument to control the service handling and response:

- **multiOption** – Use the multiOption element to specify whether the service should continue if an error is encountered, or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. If you specify CONTINUE-ON-FAILURE, then failures do not result in a return before all items have been processed.
- **sections** and **specifiedSections** – Use these elements to specify which parts of an item should be returned in order to limit the data that is returned for a given item. The sections that are not specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want.
- **limitedField** – Use the limitedField element to specify specific fields to control the item data that is returned. For example, you can specify one or more fields to limit a service response to return only the fields that you want returned.

For more information on the options elements, see [MultipleResponseItemOptions \[page 166\]](#).

Faults

- The issueId = '<issue id>' provided is not unique for table '<database table name>'
- Invalid item id 0 for table 0.
- The item ID is not valid.
- The user lacks sufficient permission.
- Validation constraint violation: data type mismatch.

XML

The following XML is a snippet of the payload that is sent with GetItems.

```
<urn:GetItems>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
    <urn:extendedData>
      <urn:data>
        <urn:name></urn:name>
        <urn:value></urn:value>
      </urn:data>
    </urn:extendedData>
  </urn:auth>
  <urn:itemId>
    <urn:displayName>BUG000164</urn:displayName>
    <urn:id>106</urn:id>
```

```

    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:106</urn:tableIdItemId>
    <urn:issueId>000164</urn:issueId>
</urn:itemId>
<urn:itemId>
    <urn:displayName>ENH000169</urn:displayName>
    <urn:id>107</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:107</urn:tableIdItemId>
    <urn:issueId>000169</urn:issueId>
</urn:itemId>
<urn:itemId>
    <urn:displayName>BUG000173</urn:displayName>
    <urn:id>109</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:109</urn:tableIdItemId>
    <urn:issueId>000173</urn:issueId>
</urn:itemId>
<urn:options>
    <urn:extraOption>
        <urn:name></urn:name>
        <urn:value></urn:value>
    </urn:extraOption>
<urn:sections>SECTIONS-SPECIFIED</urn:sections>
<urn:specifiedSections>SECTION:FIXED</urn:specifiedSections>
<urn:limitedField>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
</urn:limitedField>
<urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>
</urn:GetItems>

```

GetItemsByQuery

Description

This service returns multiple items using a *where* clause and an *order by* clause to determine the set of items returned.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
table (required)	TableIdentifier [page 126]	Specifies the table that contains the items that you want to return.
queryWhereClause (optional)	string	An SQL statement to find items with <i>TS_ID</i> >0. If not provided, all items in the table are returned.
orderByClause (optional)	string	An SQL statement to order the returned items. Enter a null or empty string for no ordering.
firstRecord	string	Used in combination with <i>maxReturnSize</i> to return chunks of records.
maxReturnSize (optional)	string	Enter the number of items to return.
options (optional)	MultipleResponseItemOptions [page 166]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

TTItemList is returned, one for each item that is returned in the call. The response is a list of items in the specified table that match the query *where* clause. The list is ordered and limited as specified. For more detailed information, see [TTItemList \[page 237\]](#).

Usage

To return items using a query, you can pass the conditions in the *where* clause itself. For example:

```
<urn:queryWhereClause>TS_ISSUEID LIKE '00106' OR TS_ISSUEID LIKE '00029'
OR TS_ISSUEID LIKE '00105'</urn:queryWhereClause>
```

```
<urn:queryWhereClause>TS_ISSUEID='00038'</urn:queryWhereClause>
```

```
<urn:queryWhereClause>TS_ID='4'</urn:queryWhereClause>
```

To return all items, send a null query:

```
<urn:queryWhereClause></urn:queryWhereClause>
```

If the number of items that are found by the query exceed the system's Listing Report Items limit, no items are returned and an error appears instead.

The total number of records that are returned cannot exceed the system's Listing Report Items limit in any single call; if you use `maxReturnSize` and `firstRecord` to return chunks of records, the number of records in a single chunk cannot exceed the Listing Report Items limit. To return more records than the Listing Report Items limit, use sequential `firstRecord` and `maxReturnSize` parameters in separate calls.

For example, if 1028 records match the query, you can specify `firstRecord` and `maxReturnSize` together to return only 1000 items in the first call, and the remainder in the second call. For example:

```
<urn:firstRecord>1</urn:firstRecord>  
<urn:maxReturnSize>1000</urn:maxReturnSize>
```

And then, in the second call:

```
<urn:firstRecord>1001</urn:firstRecord>  
<urn:maxReturnSize>1000</urn:maxReturnSize>
```

You can also use the `firstRecord` and `maxReturnSize` arguments to return pages of items. For example, to return all 1028 records in chunks of 100, you would make eleven total calls. In each call, no chunk can be greater than the Listing Report Items limit.

In the `maxReturnSize` element, you can also set the value to zero to use the system "Listing Report Items" limit. A number greater than zero (but less than the Listing Report Items limit) returns the number of items that you specify.

You can use the following elements in the options argument to control the service handling and response:

- **multiOption** – Use the `multiOption` element to specify whether the service should continue if an error is encountered, or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline.

If you specify `CONTINUE-ON-FAILURE`, then failures do not result in a return before all items

have been processed.

- **sections** and **specifiedSections** – Use these elements to specify which parts of an item should be returned in order to limit the data that is returned for a given item. The sections that are not specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want.

- **limitedField** – Use the limitedField element to specify fields that control the item data that is returned. For example, you can specify one or more fields to limit a service response to return only the fields that you want to return.

For more information on the options elements, see [MultipleResponseItemOptions](#) [page 166].

Faults

- Invalid database pointer.
- The table ID is not valid.
- The user lacks sufficient permission.
- Creating the record fails.
- Query exceeds system "Listing Report Items" limit.
- Reading the item fails.

XML

The following XML is a snippet of the payload being sent with GetItemsByQuery.

```
<urn:GetItemsByQuery>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:table>
    <urn:displayName></urn:displayName>
    <urn:id>1000</urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
  </urn:table>
  <urn:queryWhereClause>TS_TITLE LIKE 'New Item'</urn:queryWhereClause>
  <urn:orderByClause>TS_TITLE</urn:orderByClause>
  <urn:firstRecord>1</urn:firstRecord>
  <urn:maxReturnSize>100</urn:maxReturnSize>
  <urn:options>
    <urn:extraOption>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:extraOption>
    <urn:sections>SECTIONS-SPECIFIED</urn:sections>
    <urn:specifiedSections>SECTION:FIXED</urn:specifiedSections>
    <urn:limitedField></urn:limitedField>
    <urn:multiOption></urn:multiOption>
  </urn:options>
</urn:GetItemsByQuery>
```

GetNoteLoggerInfo

Description

This service returns the mail box e-mail address that is configured for the E-mail Recorder feature.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

NoteLoggerInfo is returned in the response. The NoteLoggerInfo type contains the e-mail address that has been designated for the E-mail Recorder. See [NoteLoggerInfo \[page 208\]](#) for more information.

Usage

This service is only used by the SBM Mobile application.

Faults

- There is no note logger mailbox configured.

XML

The following XML is a snippet of the payload being sent with GetNoteLoggerInfo.

```
<urn:GetNoteLoggerInfo>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
</urn:GetNoteLoggerInfo>
```

GetReports

Description

This service returns a list of reports within a specified range, limited by one or more optional filters.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
queryRange (optional)	QueryRange [page 115]	The QueryRange type allows you to specify the number of reports to return. This enables you to limit the number of reports that are returned.
reportsFilter (optional)	ReportsFilter [page 173]	The ReportsFilter type allows you to filter the reports that are returned based on optional parameters similar to the Find Reports command in the SBM User Workspace.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

GetReportsResult is returned. A filtered list of reports, within the specified range, is displayed in the response. The response contains the number of reports returned and a high-level description for each report. Use the `isQueryAtRuntime` element in the response to determine if the report can be executed using the RunReport call (query at runtime reports cannot be executed by RunReport). For more detail, see [GetReportsResult \[page 202\]](#).

Usage

The GetReports call finds a list of available reports without actually running any of the reports themselves. You can use GetReports to search for all reports that you have privileges to run, modify, and delete within the provided range . You can also use this call to search for auxiliary table reports that you can run, modify, and delete. You can use this call to identify which report you would like to run using the UUID of the report. To run a given report in the returned list, use [RunReport \[page 80\]](#). You can optionally use the returned report URL to run the report in a Web browser.

Faults

- Invalid database pointer.
- The project ID is not valid.
- The user lacks sufficient permission.
- Returning the report fails.

XML

The following XML is a snippet of the payload that is sent with GetReports.

```

<urn:GetReports>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:queryRange>
    <urn:startIndex>1</urn:startIndex>
    <urn:fetchSize>4</urn:fetchSize>
    <urn:totalCount></urn:totalCount>
  </urn:queryRange>
  <urn:reportsFilter>
    <urn:solution>
      <urn:displayName></urn:displayName>
      <urn:id>1</urn:id>
      <urn:uuid></urn:uuid>
      <urn:uniqueName></urn:uniqueName>
      <urn:tabName></urn:tabName>
    </urn:solution>
    <urn:project>
      <urn:displayName></urn:displayName>
      <urn:id>4</urn:id>
      <urn:uuid></urn:uuid>
      <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
    </urn:project>
    <urn:table>
      <urn:displayName></urn:displayName>
      <urn:id>1000</urn:id>
      <urn:uuid></urn:uuid>
      <urn:dbName></urn:dbName>
    </urn:table>
    <urn:author>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:loginId></urn:loginId>
    </urn:author>
    <urn:reportType>LISTING</urn:reportType>
    <urn:reportCategory>ALL</urn:reportCategory>
    <urn:reportAccessLevel>USER</urn:reportAccessLevel>
    <urn:report>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:report>
    <urn:searchByName></urn:searchByName>
    <urn:includeSubProjects>true</urn:includeSubProjects>
    <urn:createdDateFrom></urn:createdDateFrom>
    <urn:createdDateTo></urn:createdDateTo>
    <urn:extendedData>
      <urn:data>
        <urn:name></urn:name>
        <urn:value></urn:value>
      </urn:data>
  </urn:reportsFilter>
</urn:GetReports>

```

```

    </urn:extendedData>
  </urn:reportsFilter>
  <urn:options>
    <urn:extraOption>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:extraOption>
  </urn:options>
</urn:GetReports>

```

GetSolutions

Description

This service returns a list of solutions that can be accessed by the user.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

SolutionData (a list of solutions) is returned in the response. Each return element contains a *SolutionIdentifier*, and additional information including the UUID. See [SolutionData](#) [page 226] for more information.

Usage

This call is a good starting point for using the SBM Web services. After calling *GetSolutions*, you can call [GetTables](#) [page 69] to get available tables. You can then use the table identifiers to get items with [GetItemsByQuery](#) [page 59], or create auxiliary items with [CreateAuxItems](#) [page 27]. To create primary items, use [GetSubmitProjects](#) [page 68] followed by [CreatePrimaryItems](#) [page 38].



Note: Primary items require the *ProjectIdentifier*, while auxiliary items require the *TableIdentifier*.

Faults

- Invalid database pointer.
- No solutions are available for the user.

XML

The following XML is a snippet of the payload that is sent with *GetSolutions*.

```

<urn:GetSolutions>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
    <urn:extendedData>
      <urn:data>
        <urn:name></urn:name>
        <urn:value></urn:value>
      </urn:data>
    </urn:extendedData>
  </urn:auth>
  <urn:options>
    <urn:extraOption>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:extraOption>
  </urn:options>
</urn:GetSolutions>

```

GetStateChangeHistory

Description

This service returns a specified range of state change history for an item.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
item (required)	ItemIdentifier [page 108]	Specifies the item for which state change history is returned.
queryRange (optional)	QueryRange [page 115]	The <i>QueryRange</i> type allows you to specify the number of change records to return. It can be used to limit the number of state changes that are returned.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

GetStateChangeHistoryResult is returned. A list containing each state change record, within the specified range, is displayed in the response. The response contains detailed information about each state change, including the state, the user who performed the transition, and the owner. For more detail, see [GetStateChangeHistoryResult \[page 204\]](#).

Usage

You use `GetStateChangeHistory` to return either the entire state change history for an item or only a portion of the history. The information that is returned is the same information that is stored in the `TS_CHANGEACTIONS` table in the database. Use the `GetStateChangeHistory` call if you want to retrieve the details of an item's lifecycle for audit purposes.

Faults

- Invalid User ID or Password.
- Invalid item id 0 for table 0.

XML

The following XML is a snippet of the payload that is sent with `GetStateChangeHistory` to only return history through the first two states.

```
<urn:GetStateChangeHistory>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:item>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId></urn:tableId>
    <urn:tableIdItemId>1000:2</urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:item>
  <urn:queryRange>
    <urn:startIndex></urn:startIndex>
    <urn:fetchSize>2</urn:fetchSize>
    <urn:totalCount></urn:totalCount>
  </urn:queryRange>
</urn:GetStateChangeHistory>
```

GetSubmitProjects

Description

This service returns a list of projects into which the user can submit. If a table ID is provided, only projects from that table are listed.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
table (optional)	TableIdentifier [page 126]	Specify a table to limit the projects that are returned.

Response

ProjectData (a list of projects, if multiple are available) is returned in the response. See [ProjectData \[page 211\]](#) for more information.

Usage

The project or projects that are returned are limited by the table you specify. Only projects available to the user are returned. Use [CreatePrimaryItems \[page 38\]](#) to submit after the desired project is found.

Faults

- Invalid database pointer.
- The table ID is not valid.
- Error reading transitions table.

XML

The following XML is a snippet of the payload that is sent with GetSubmitProjects.

```
<urn:GetSubmitProjects>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:table>
    <urn:displayName>Issues</urn:displayName>
    <urn:id>1000</urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>UBG_ISSUES</urn:dbName>
  </urn:table>
</urn:GetSubmitProjects>
```

GetTables

Description

This service returns a list of available tables that a user can access, optionally filtered by solution and table type.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
solution (optional)	SolutionIdentifier [page 122]	Specify a solution to only return the tables in that solution.
tableType (optional)	Table-Type [page 127]	The type of table to return. If a table type is specified, only available tables of that type are listed.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

TableData is returned. The list of available tables and their fields are returned, optionally filtered by either solution or table type. For more information, see [TableData \[page 230\]](#).

Usage

If no solution ID is supplied, available tables are listed for all solutions. Use [GetSolutions \[page 66\]](#) to return available solution IDs.

Faults

- Invalid database pointer.
- Reading the tables fails.
- GetTables not implemented for table type.

XML

The following XML is a snippet of the payload that is sent with GetTables.

```
<urn:GetTables>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
    <urn:extendedData>
      <urn:data>
        <urn:name></urn:name>
        <urn:value></urn:value>
      </urn:data>
    </urn:extendedData>
  </urn:auth>
  <urn:solution>
    <urn:displayName>Issue Defect Management</urn:displayName>
```

```

    <urn:id>1</urn:id>
    <urn:uuid></urn:uuid>
    <urn:uniqueName></urn:uniqueName>
    <urn:tabName></urn:tabName>
  </urn:solution>
  <urn:tableType>PRIMARY-TABLE</urn:tableType>
  <urn:options>
    <urn:extraOption>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:extraOption>
  </urn:options>
</urn:GetTables>

```

GetUsers

Description

This services returns identification information about a user and the user's preferences.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
getCurrentUser	boolean	Specify true to return user info for the user specified in the auth argument of the GetUsers call. Specify false to use the other arguments to return users instead. Default value is false.
searchByName	string	Used to specify the name of the user as a search parameter.
user	UserIdentifier [page 157]	Used to return a specific user or list of users. Specify multiple UserIdentifiers to return multiple users.
options	UserResponseOptions [page 185]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

UserHolder is returned. The UserHolder response contains one or more UserIdentifiers and additional information from the users preferences. For more specific information, see [UserHolder \[page 238\]](#).

Usage

The `GetUsers` call is useful when you need data about a user account. The `GetUsers` call retrieves data for a user account as it exists in the `TS_USERS` table of the database. To retrieve privileges for a given user account, use the admin Web service call [GetUserPrivileges \[page 289\]](#). To determine if a specific user has a given privilege, use the admin Web service call [HasUserPrivilege \[page 294\]](#).

Use the following arguments to determine which users are returned in the response:

- **getCurrentUser** – Enables you to specify whether the service should only return user information for the user that is making the call. If you set `getCurrentUser` to `true`, the current user is returned, regardless of the data sent in the `searchByName` and `user` arguments.
- **searchByName** – Enables you to enter a single string to return user accounts. For example, if you enter `Joe` as the `searchByName` value, user records with following login IDs are returned: `Joe`, `Joel`, `Joey`. You can not enter multiple strings. The `searchByName` argument is ignored if `getCurrentUser` is set to `true` or if a `UserIdentifier` is specified in the `user` argument.



Note: To return all user records in the database, leave `getCurrentUser` set to `false`, do not provide a value for `searchByName`, and do not enter specific `UserIdentifiers` in the `user` argument. If you have a large number of users in your database, consider limiting the return data using one or more arguments.

- **user** – Enables you to specify one or more specific user accounts to be returned. If you want to return multiple users, you must specify each desired user by providing the `UserIdentifier` in a list of multiple `user` arguments. The `user` argument takes precedence over the `searchByName` argument.

Use the following elements in the `options` parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all users have been processed.
- **sections** and **specifiedSections** – Enables you to specify which parts of a user record should be returned. This allows you to limit the data that is returned for a given user. The sections that aren't specified are not included in the response. For example, if you only need basic user information in the response, use the `sections` parameter to return only the `STANDARD` section.

For more information on the options elements, see [UserResponseOptions \[page 185\]](#).

Faults

- Invalid database pointer.
- The user ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with `GetUsers`. In this example, `searchByName` is used to find all users with the string `Joe` in the user login ID.

```
<urn:GetUsers>
  <urn:auth>
    <urn:userId>Admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:getCurrentUser></urn:getCurrentUser>
  <urn:searchByName>Joe</urn:searchByName>
  <urn:user>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:GetUsers>
```

In this example, `getCurrentUser` is empty (or false), `searchByName` is left empty, and no user is provided in the user argument. This call returns all the users in the system.

```
<urn:GetUsers>
  <urn:auth>
    <urn:userId>Admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:getCurrentUser></urn:getCurrentUser>
  <urn:searchByName></urn:searchByName>
  <urn:user>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:GetUsers>
```

GetVersion

Description

This service returns the SBM version number.

Arguments

None.

Response

A string is returned, showing the version number. For example:

```
<ae:GetVersionResponse>
  <ae:return>Version 2010 R1.200</ae:return>
</ae:GetVersionResponse>
```

Usage

None.

Faults

None.

XML

The following XML shows the payload that is sent with `GetVersion`.

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:urn="urn:sbmappservices72">
  <soap:Header/>
  <soap:Body>
    <urn:GetVersion/>
  </soap:Body>
</soap:Envelope>
```

GetWorkflows

Description

This service returns data about the graphical workflow diagram.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
project (required)	ProjectIdentifier [page 114]	Identifies the workflow diagram that should be returned.

Response

`WorkflowHolder` is returned, one for each project that is specified in the call. Detailed information about the workflow diagram for each project that is specified is provided in the response. For more detail, see [WorkflowHolder \[page 254\]](#).

Usage

Use `GetWorkflows` to return details for one or more graphical workflows. This information is useful when you want to recreate a mapping of a workflow in another system. You must have the `View Workflow Graphically` privilege to use this call.

Faults

- Invalid item id 0 for table 0.
- The item ID is not valid.
- The user lacks sufficient permission.
- Validation constraint violation: data type mismatch.

XML

The following XML is a snippet of the payload that is sent with `GetWorkflows`.

```
<urn:GetWorkflows>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:project>
    <urn:displayName>IDM Project</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualified_name></urn:fullyQualified_name>
    <urn:internalName></urn:internalName>
  </urn:project>
</urn:GetWorkflows>
```

IsUserValid

Description

This service determines whether a specified user is valid.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The <code>userId</code> and <code>password</code> can be specified with HTTP BASIC or WS-SECURITY instead.
user (optional)	UserIdentifier [page 157]	The user to be checked.

Response

A boolean is returned, showing whether the user is valid (true) or not (false). The user account is checked in the context of either the calling user or the specified user. For example:

```
<ae:IsUserValidResponse>
  <ae:return>true</ae:return>
</ae:IsUserValidResponse>
```

Usage

IsUserValid will return true if the specified user was found in the database and is not deleted or disabled. Otherwise false is returned.

Faults

- Invalid database pointer.
- The login ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with IsUserValid.

```
<urn:IsUserValid>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:user>
    <urn:displayName>carmen</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:IsUserValid>
```

LinkSubtask

Description

This service links one item to another as a subtask.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
parentItem (optional)	ItemIdentifier [page 108]	The parent item of the subtask.
childItem (optional)	ItemIdentifier [page 108]	The child item that will become the subtask.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

An empty response is returned: `<ae:LinkSubtaskResponse/>`.

Usage

Use this call to create a subtask relationship between primary items.

Faults

- Invalid database pointer.
- Reading the tables fails.
- GetTables not implemented for table type.

XML

The following XML is a snippet of the payload that is sent with LinkSubtask.

```

<urn:LinkSubtask>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:parentItem>
    <urn:displayName></urn:displayName>
    <urn:id>109</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId></urn:tableId>
    <urn:tableIdItemId>1000:109</urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:parentItem>
  <urn:childItem>
    <urn:displayName></urn:displayName>
    <urn:id>79</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId></urn:tableId>
    <urn:tableIdItemId>1000:79</urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:childItem>
</urn:LinkSubtask>

```

Logout

Description

This service releases any licenses and resources associated with the session.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
options	Options [page 171]	Holds name value pairing for future arguments.

Response

An empty XML response is returned and the session is ended. Failure will keep the session open.

```
<ae:LogoutResponse/>
```

Usage

The Logout call logs out the user from the current active session. There is no effect if previous Web service calls are not made before Logout is called.

Faults

- Authentication error if invalid credentials.

XML

The following XML is a snippet of the payload that is sent with Logout.

```
<urn:Logout>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
</urn:Logout>
```

RunModScript

Description

This service runs a specified SBM ModScript.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
scriptId (required)	Identifier [page 107]	Identifier for the script to execute.
inputs	ExtendedData [page 162]	Holds name/value pairing for inputs to the ModScript that you want to execute.

Response

ModScriptHolder is returned. For more detail, see [ModScriptHolder \[page 207\]](#).

Usage

Use RunModScript to execute any of the methods available in SBM ModScript. You can also call RunModScript from an orchestration workflow to execute a ModScript. For example, in an orchestration, you might want to invoke a script from the command-line, read/write data to a file, or update an item with text. You can have an orchestration call ModScript for any of these tasks and more.



Note: You can send any one of the elements in *scriptId*—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the script.

For details on programming with SBM ModScript, refer to the *SBM ModScript Reference Guide* or SBM Composer help.

Faults

- Invalid ModScript <script id>.
- The user lacks sufficient permission.
- Validation constraint violation: data type mismatch.

XML

The following XML is a snippet of the payload that is sent with RunModScript.

```
<urn:RunModScript>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:scriptId>
    <urn:displayName>test_script</urn:displayName>
    <urn:id></urn:id>
```

```

    <urn:uuid></urn:uuid>
  </urn:scriptId>
  <urn:inputs>
    <urn:data>
      <urn:name>param_two</urn:name>
      <urn:value>two</urn:value>
    </urn:data>
    <urn:data>
      <urn:name>param_one</urn:name>
      <urn:value>one</urn:value>
    </urn:data>
  </urn:inputs>
</urn:RunModScript>

```

RunReport

Description

This service runs a specified Listing report for a user, given the proper privileges.



Note: This call is deprecated for all uses other than running Built-in reports. Use [RunReportXml \[page 82\]](#) for all other reports.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
queryRange (optional)	QueryRange [page 115]	Enables you to specify the number of reports to return. Used to limit the number of reports that are returned.
report (required)	ReportIdentifier [page 119]	Specifies the report to run.
solution (optional)	SolutionIdentifier [page 122]	Specifies the solution that the report is based on.
project (optional)	ProjectIdentifier [page 114]	Specifies the project that the report was created against.
table (optional)	TableIdentifier [page 126]	Specifies the table that the report is based on.

Argument	Type	Description
reportCategory (optional)	ReportCategory [page 118]	A broader enumeration that limits the response based on the category of report (built-in reports, application reports, reports you authored).
reportAccessLevel (optional)	ReportAccessLevel [page 116]	An enumeration that limits the response based on the report's access level (PRIVATE, GUEST, USER, or MANAGER).
options	Options [page 171]	Holds name value pairing for future arguments.

Response

RunReportResult is returned. A high-level description of the report is returned, along with a description of each column in the report. The fields used to order the results are shown as well. In the result parameter, the actual field values can be found. For more detail, see [RunReportResult \[page 217\]](#).

Usage

The RunReport call executes a given report, assuming you have the proper privilege. The GetReports call finds a list of available reports without actually running any of the reports themselves. In order to run one of those returned reports, use RunReport. If no fetchSize is specified in the QueryRange, up to 1000 items can be returned.

In order to run a Built-in report, you must provide either solutionID or solutionName. Since Built-in reports aren't tied to a specific application, you must provide the RunReport call with the solution ID or name (which can be found in the GetSolutionsWithUniqueName call). User-created reports (those stored in the TS_REPORTS table) do not require solutionID or solutionName. To run a user-created report, you simply need to provide the report ID (which can be obtained from the GetReports call).

Faults

- Invalid database pointer.
- The user lacks sufficient permission.
- Executing the report fails.
- Could not run built-in report because it needs correct solutionName (or ID) parameter.
- Two or more reports exist with the name *<reportName>*. Please provide a solution ID, solution name, or use additional parameters to identify which report to run.

XML

The following XML is a snippet of the payload that is sent with RunReport.

```
<urn:RunReport>
  <urn:auth>
```

```

    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
</urn:auth>
<urn:queryRange>
    <urn:startIndex></urn:startIndex>
    <urn:fetchSize></urn:fetchSize>
    <urn:totalCount></urn:totalCount>
</urn:queryRange>
<urn:report>
    <urn:displayName>Test Listing Report</urn:displayName>
    <urn:id>118</urn:id>
    <urn:uuid>45e5b0ce-fb41-4a67-be7a-5941cdd04b90</urn:uuid>
</urn:report>
<urn:solution>
    <urn:displayName>Issue Defect Management</urn:displayName>
    <urn:id>2</urn:id>
    <urn:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</urn:uuid>
    <urn:uniqueName>ISSUE_DEFECT_MANAGEMENT</urn:uniqueName>
    <urn:tabName>IDM</urn:tabName>
</urn:solution>
<urn:project>
    <urn:displayName>Animation Pro</urn:displayName>
    <urn:id>6</urn:id>
    <urn:uuid>2ac5ef27-71da-4b07-ab7e-dddbc9c2d8c7</urn:uuid>
    <urn:fullyQualifiedName>Base Project||Base IDT Project||
    Software Development||Animation Pro</urn:fullyQualifiedName>
</urn:project>
<urn:table>
    <urn:displayName>Issues</urn:displayName>
    <urn:id>1000</urn:id>
    <urn:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</urn:uuid>
    <urn:dbName>UBG_ISSUES</urn:dbName>
</urn:table>
<urn:reportCategory>USERREPORTS</urn:reportCategory>
<urn:reportAccessLevel>GUEST</urn:reportAccessLevel>
</urn:RunReport>

```

RunReportXml

Description

This service runs a specified report for a user, given the proper privileges.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
report (required)	ReportData [page 172]	Specifies the report to run.
options	Options [page 171]	In the options argument, you can specify an XSL stylesheet to transform the resultant XML. You can also specify that the results are returned in a .zip file (in base64 encoded format).

Response

RunReportXmlResult is returned. The report contents are returned in XML format by default. For more detail, see [RunReportXmlResult \[page 223\]](#).

Usage

The RunReportXml call executes a given report, assuming you have the proper privilege. Use the GetReports call to return a list of available reports without actually running any of the reports themselves. Once you identify the desired report, use RunReportXml or RunReport (which only executes Listing reports) to execute the report.

The RunReportXML call enables you to specify a stylesheet in the `options` parameter to transform the XML result into a report that is similar to what is displayed in SBM User Workspace. You must specify a report stylesheet located on the Application Engine server here: `installDir\SBM\Application Engine\template`. You can also specify an additional parameter to have Listing report results returned in a base64 encoded .zip file. For example, to transform the XML using the `Excel.xsl` stylesheet provided with SBM and zip the payload, send the following:

```
<urn:options>
  <urn:extraOption>
    <urn:name>XSLStyleSheet</urn:name>
    <urn:value>xsl/Excel.xsl</urn:value>
  </urn:extraOption>
  <urn:extraOption>
    <urn:name>zip</urn:name>
  </urn:extraOption>
</urn:options>
```



Note: In order to run a Built-in report, you must use RunReport. For details, see [RunReport \[page 80\]](#). This call is deprecated for all uses other than running Built-in reports.

Faults

- Invalid database pointer.
- The user lacks sufficient permission.
- Report was not found.

XML

The following XML is a snippet of the payload that is sent with RunReportXml.

```
<urn:RunReportXml>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
    <urn:extendedData></urn:extendedData>
  </urn:auth>
  <urn:report>
    <urn:id>47</urn:id>
    <urn:reportReference></urn:reportReference>
  </urn:report>
  <urn:options>
  <urn:extraOption>
    <urn:name>XSLStyleSheet</urn:name>
    <urn:value>xsl/Excel.xsl</urn:value>
  </urn:extraOption>
  <urn:extraOption>
    <urn:name>zip</urn:name>
  </urn:extraOption>
  </urn:options>
</urn:RunReportXml>
```


UpdateFileAttachment

Description

This service updates an existing file attachment for a specified item.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
item (required)	ItemIdentifier [page 108]	The item that contains the file attachment.

Argument	Type	Description
attachmentContents (required)	FileAttachmentContents [page 103]	<p>The file attachment details and content, which are all optional except for the attachment ID.</p> <p> Note: attachmentContents is of type FileAttachmentContents, but also includes attachment detail found in FileAttachment. The XML example below shows the parameters from both FileAttachment and FileAttachmentContents. See FileAttachment [page 101] for more information.</p>
options	Options [page 171]	Holds name value pairing for future arguments.

Response

FileAttachment is returned. The newly updated file attachment details are returned (not the content itself). For more detail, see [FileAttachment \[page 101\]](#)

Usage

The UpdateFileAttachment call provides a method to update a single attachment on an auxiliary or primary item, given the proper privileges. If the call fails, the file attachment will not be updated. To update multiple file attachments for a single item, UpdateFileAttachment must be called for each attachment. Any data that is provided is updated as appropriate. Attachment ID and modification time cannot be set.

Faults

- Invalid database pointer.
- The item ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload that is sent with UpdateFileAttachment.

```
<urn:UpdateFileAttachment>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:item>
```

```

    <urn:displayName></urn:displayName>
    <urn:id>109</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:109</urn:tableIdItemId>
    <urn:issueId>BUG000173</urn:issueId>
  </urn:item>
  <urn:attachmentContents>
    <urn:id>51</urn:id>
    <urn:name>file attach updated MER00023!</urn:name>
    <urn:fileName>wslog.txt</urn:fileName>
    <urn:showAsImage>false</urn:showAsImage>
    <urn:modificationDateTime></urn:modificationDateTime>
    <urn:url></urn:url>
    <urn:accessType>ATTACHACCESS-RESTRICTED</urn:accessType>
    <urn:contentsBase64>
      <urn:data>cid:1155248127636</urn:data>
    </urn:contentsBase64>
  </urn:attachmentContents>
</urn:UpdateFileAttachment>

```

TransitionItem

Description

This service transitions an item.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
item (required)	TTItem [page 133]	The items to be transitioned. The <i>TTItem</i> type holds the generic data for the item. You must have the <i>itemID</i> filled in at a minimum.
transition (optional)	TransitionIdentifier [page 128]	The transition that you intend to invoke against the item.
breakLock	boolean	Specify True to break any existing item lock. Specify False to honor the item lock.
options (optional)	ResponseItemOptions [page 175]	Enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned for the transitioned item. The item is returned with updated item data, which shows the unique TS_ID the each record and the TS_ID of the table. For more detail, see [TTItemHolder \[page 234\]](#).

Usage

The TransitionItem call provides a method to transition or update a single record in a primary table or auxiliary table. If a transition of 0 is specified, the default update transition is used. You can update records in both custom and system primary tables, given the proper privileges.

If you specify a specific transition for the call to use, that transition needs to be a valid transition for the items' project.

To create notes, item links, and URL attachments on the item, add records to the lists that are defined in TTItem. To update a file attachment, see [UpdateFileAttachment \[page 84\]](#).

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **sections** and **specifiedSections** – Enables you to specify which parts of an item should be returned. This allows you to limit the data that is returned for a given item. The sections that aren't specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use the sections parameter to return only the sections of an item you want.
- **limitedField** – Enables you to specify which fields you want returned in the response. For example, you can specify one or more fields to limit a service response to return only the fields that you want returned.

For more information on the options elements, see [ResponseItemOptions \[page 175\]](#).

Faults

- Invalid database pointer.
- Invalid item.
- The user lacks sufficient permission.
- The transaction fails.
- Reading the item fails.
- Invalid project.

XML

The following XML is a snippet of the payload that is sent with TransitionItem.

```
<urn:TransitionItem>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
```

```
</urn:auth>
<urn:item>
  <urn:id>
    <urn:displayName>000231</urn:displayName>
    <urn:id>197</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableItemId>1000:197</urn:tableItemId>
    <urn:issueId></urn:issueId>
  </urn:id>
  <urn:itemType></urn:itemType>
  <urn:project>
    <urn:displayName>Animation Pro</urn:displayName>
    <urn:id>6</urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName>Base Project||Base IDT Project||
      Software Development||Animation Pro</urn:fullyQualifiedName>
  </urn:project>
  <urn:title></urn:title>
  <urn:description>This is a test item.</urn:description>
  <urn:extendedField>
    <urn:id>
      <urn:displayName>Developer</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:dbName>DEVELOPER</urn:dbName>
    </urn:id>
    <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
    <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
    <urn:value>
      <urn:displayValue>admin</urn:displayValue>
      <urn:internalValue></urn:internalValue>
      <urn:uuid></urn:uuid>
    </urn:value>
  </urn:extendedField>
</urn:item>
<urn:transition>
  <urn:displayName>Fix</urn:displayName>
  <urn:id>8</urn:id>
  <urn:uuid></urn:uuid>
</urn:transition>
<urn:breakLock>true</urn:breakLock>
<urn:options>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:FIXED</urn:specifiedSections>
  <urn:limitedField></urn:limitedField>
</urn:options>
</urn:TransitionItems>
```

TransitionItems

Description

This service transitions one or more items.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 161]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
item (required)	TTItem [page 133]	The list of items to be transitioned. The <i>TTItem</i> types hold the generic data for each item. You must have the <i>itemID</i> filled in at a minimum for each item in the list.
transition (optional)	TransitionIdentifier [page 128]	The transition that you intend to invoke against one or more items.
breakLock	boolean	Specify True to break any existing item lock. Specify False to honor the item lock.
options (optional)	MultipleResponseItemOptions [page 166]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

TTItemHolder is returned, one for each transitioned item. The primary items are returned with updated item data, which shows the unique *TS_IDs* of each record and *TS_IDs* of the table. For more detail, see [TTItemHolder \[page 234\]](#).

Usage

The *TransitionItems* call provides a method to transition or update multiple records in a primary table or auxiliary table. If a transition of 0 is specified, the default update transition is used. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all items have been processed. You can update records in both custom and system primary tables, given the proper privileges.

If you specify a specific transition for the call to use, that transition needs to be a valid transition for the items' project.

To create notes, item links, and URL attachments on the items, add records to the lists that are defined in each *TTItem*. To update a file attachment, see [UpdateFileAttachment \[page 84\]](#).

Use the following elements in the *options* parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each

successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all items have been processed.

- **sections** and **specifiedSections** – Enables you to specify which parts of an item should be returned. This allows you to limit the data that is returned for a given item. The sections that aren't specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use the sections parameter to return only the sections of an item you want.
- **limitedField** – Enables you to specify which fields you want returned in the response. For example, you can specify one or more fields to limit a service response to return only the fields that you want returned.

For more information on the options elements, see [MultipleResponseItemOptions](#) [page 166].

Usage

Faults

- Invalid database pointer.
- Invalid item.
- The user lacks sufficient permission.
- The transaction fails.
- Reading the item fails.
- Invalid project.

XML

The following XML is a snippet of the payload that is sent with TransitionItems.

```
<urn:TransitionItems>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:item>
    <urn:id>
      <urn:displayName>000231</urn:displayName>
      <urn:id>197</urn:id>
      <urn:uuid></urn:uuid>
      <urn:tableId>1000</urn:tableId>
      <urn:tableIdItemId>1000:197</urn:tableIdItemId>
      <urn:issueId></urn:issueId>
    </urn:id>
    <urn:itemType></urn:itemType>
    <urn:project>
```

```

    <urn:displayName>Animation Pro</urn:displayName>
    <urn:id>6</urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
</urn:project>
<urn:title></urn:title>
<urn:description>This is a test item.</urn:description>
<urn:extendedField>
  <urn:id>
    <urn:displayName>Developer</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>DEVELOPER</urn:dbName>
  </urn:id>
  <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>admin</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
</urn:item>
<urn:item>
  <urn:id>
    <urn:displayName>000232</urn:displayName>
    <urn:id>198</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:198</urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:id>
  <urn:itemType></urn:itemType>
  <urn:project>
    <urn:displayName>Animation Pro</urn:displayName>
    <urn:id>6</urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:project>
  <urn:title></urn:title>
  <urn:description>Another test.</urn:description>
  <urn:subtasks/>
  <urn:extendedField>
    <urn:id>
      <urn:displayName>Priority</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:dbName>PRIORITY</urn:dbName>
    </urn:id>
    <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
    <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
    <urn:value>
      <urn:displayValue>1</urn:displayValue>
      <urn:internalValue></urn:internalValue>
      <urn:uuid></urn:uuid>

```

```

        </urn:value>
    </urn:extendedField>
</urn:item>
<urn:transition>
    <urn:displayName>Fix</urn:displayName>
    <urn:id>8</urn:id>
    <urn:uuid></urn:uuid>
</urn:transition>
<urn:breakLock>true</urn:breakLock>
<urn:options>
    <urn:sections>SECTIONS-SPECIFIED</urn:sections>
    <urn:specifiedSections>SECTION:FIXED</urn:specifiedSections>
    <urn:limitedField></urn:limitedField>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>
</urn:TransitionItems>

```

Common Types

This section provides detailed descriptions of SBM Application Web service types that appear as both arguments and response elements. The types listed here contain one or more parameters, which make up the data being sent to or returned by the Web service. The parameters listed in each types are either simple or complex types themselves. If the type is complex, a link to further detail of that type will be provided in the **Type** column.

The following table lists all supported arguments in alphabetical order, followed by a brief description of each type. Select an argument to view detailed information including:

- **Description** – A brief description of the type.
- **Parameters** – A table that describes the simple and complex types for each common type. For each complex type, click the type name for a detailed description.
- **Usage** – Any notes, additional details, and considerations are addressed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Common Types

Type	Description
ApplicationIdentifier [page 95]	Holds the complete identification information for an application.
Attachment-Access-Type [page 96]	Indicates the type of attachment on an item.
Band-Orientation [page 97]	Indicates the direction of swimlanes in the graphical workflow.

Type	Description
ContactIdentifier [page 98]	Holds the complete identification information for a contact.
Field-Attribute [page 98]	Indicates the selection style used for <i>Binary/Trinary</i> fields.
FieldIdentifier [page 99]	Holds the complete identification information for a field.
FieldValue [page 100]	Holds generic identification information for a field value.
FileAttachment [page 101]	Holds the details of a file that you upload to the server.
FileAttachmentContents [page 103]	Holds the actual contents of a file attachment.
FileBufferBase64 [page 103]	Holds the binary contents of a file in base64.
FileContents [page 104]	Holds the actual contents of a file.
GrantState [page 104]	Holds privilege or role assignments for a user.
GroupIdentifier [page 105]	Holds the complete identification information for a group.
GroupIdentifierEx [page 106]	Holds the complete identification information for one or more groups.
Identifier [page 107]	Holds generic identification information.
ItemIdentifier [page 108]	Holds the complete identification information for an item.
ItemLink [page 109]	Holds information about an item link.
ItemLink-Type [page 110]	Indicates the type of item link.
Note [page 111]	Holds information about a note.

Type	Description
PrivilegeIdentifier [page 113]	Holds the identification information for a privilege.
PrivilegeKind [page 114]	Holds the type of privilege.
ProjectIdentifier [page 114]	Holds the complete identification information for a project.
QueryRange [page 115]	Limits the number of records returned in a query.
ReportAccessLevel [page 116]	Indicates the access level that is assigned to a report.
ReportCategory [page 118]	A filter that describes a grouping of reports.
ReportIdentifier [page 119]	Holds the complete identification information for a report.
ReportType [page 120]	Holds information about a type of report.
RoleIdentifier [page 121]	Holds the complete identification information for a role.
Selection-Type [page 121]	Holds the type of field selection.
SolutionIdentifier [page 122]	Holds the complete identification information for a solution.
StateIdentifier [page 124]	Holds the complete identification information for a state.
Subtasks [page 125]	Holds information about a subtask relationship.
TableIdentifier [page 126]	Holds the complete identification information for a table.
Table-Type [page 127]	Indicates the type of table.
TransitionIdentifier [page 128]	Holds the complete identification information for a transition.

Type	Description
Transition-Style [page 129]	Indicates the visual style of a transition in the graphical workflow.
Transition-Type [page 130]	Indicates the type of transition.
TTItem [page 133]	Holds all of the SBM field information for an item.
URLAttachment [page 155]	Holds information about a URL attached to an auxiliary or primary item.
UserIdentifier [page 157]	Holds the complete identification information for a user.
UserIdentifierEx [page 157]	Holds the complete identification information for one or more users.
WorkflowIdentifier [page 158]	Holds the complete identification information for a workflow.

ApplicationIdentifier

Description

The ApplicationIdentifier type holds the identification information for an application. The ApplicationIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for an application.

Usage

The ApplicationIdentifier is the identifier that can be used in Web service methods to uniquely identify an application. The ApplicationIdentifier contains the generic information about an application (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML snippet shows ApplicationIdentifier in the return element of the GetApplications response.

```
<ae:return>
  <ae:application xsi:type="ae:ApplicationIdentifier">
    <ae:displayName>Incident Management</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>955e8e0e-9342-46ed-ba06-d1bfdc1cdf80</ae:uuid>
  </ae:application>
  <ae:description>Provides simple Incident Management
  →functionality for small Support teams.</ae:description>
  <ae:appDefUUID/>
  <ae:revision>2</ae:revision>
</ae:return>
```

Attachment-Access-Type

Description

Attachment-Access-Type indicates the type of attachment on an item. It is used for note, item link, URL, and file attachments. This type is used to determine whether the attachment has a restriction, is unrestricted, or if neither is set.

Parameters

Name	Type	Description
ATTACHACCESS-DEFAULT	string	System default for new attachments that makes the attachment only viewable by user privilege.
ATTACHACCESS-RESTRICTED	string	Explicitly restricts the attachment as specified by user privileges.
ATTACHACCESS-UNRESTRICTED	string	Makes the attachment visible to all users who can view the item.

Usage

You can allow users to specify individual attachments to items as "unrestricted," meaning that anyone with privileges to view the item can also view any of its attachments that are designated as unrestricted. By default, all attachments are restricted based on privileges granted to users.

The UNRESTRICTED status makes the file visible to all users who can view the item. You can set a file to have RESTRICTED status to restrict the file as specified by user privileges. The UNRESTRICTED status is disabled if you do not have privileges to set file attachments as unrestricted for the selected project or auxiliary table.

The RESTRICTED/UNRESTRICTED flag in Attachment-Access-Type sets or clears the same restriction that users can designate when adding attachments in the Web browser. The DEFAULT status is used when neither flag has been set.

XML

The following XML shows Attachment-Access-Type in the `<urn:accessType>` element of a typical call.

```
<urn:attachmentContents>
  <urn:id>16</urn:id>
  <urn:name>pdf_doc</urn:name>
  <urn:fileName>relnotes.pdf</urn:fileName>
  <urn:showAsImage>false</urn:showAsImage>
  <urn:modificationDateTime></urn:modificationDateTime>
  <urn:url></urn:url>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
  <urn:contentsBase64></urn:contentsBase64>
</urn:attachmentContents>
```

Band-Orientation

Description

Band-Orientation indicates the direction of swimlanes in the graphical workflow.

Parameters

Name	Type	Description
BAND-HORIZONTAL	string	Used when a swimlane is horizontal.
BAND-VERTICAL	string	Used when a swimlane is vertical.

Usage

The Band-Orientation identifies the direction of swimlanes in the graphical workflow. For more information, see [GetWorkflows \[page 74\]](#).

XML

The following XML shows Band-Orientation in the `<ae:orientation>` element as seen in the `GetWorkflowsResponse`.

```
<ae:band>
  <ae:id>
    <ae:displayName>Front Line Support</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>5bebf89f-4a1f-45e2-9ebc-df4eed243a8c</ae:uuid>
  </ae:id>
  <ae:origin>-175</ae:origin>
  <ae:orientation>BAND-HORIZONTAL</ae:orientation>
```

```

<ae:description/>
<ae:size>106</ae:size>
<ae:styleClass/>
<ae:styleOverride>bgcolor: #8BC53F;align: Center;valign: Center;cornerradius: 0;</ae:styleOv
</ae:band>

```

ContactIdentifier

Description

The ContactIdentifier type holds the identification information for a user's contact record. The ContactIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a contact.

Usage

The ContactIdentifier is the identifier that can be used in Web service methods to uniquely identify a user's contact record. The ContactIdentifier contains the generic information about a contact (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows ContactIdentifier as seen in a typical call.

```

<urn:contact>
  <urn:displayName>Joe Manager</urn:displayName>
  <urn:id>1</urn:id>
  <urn:uuid>69d03cc6-e635-47d8-ab2e-a8be48a22f0a</urn:uuid>
</urn:contact>

```

Field-Attribute

Description

Field-Attribute indicates the selection style used for *Binary/Trinary* fields.

Parameters

Name	Type	Description
ATTRIBUTES-NOT-DEFINED	string	Used when the selection mode is not defined.

Name	Type	Description
BINARY-ATTRIBUTE-LISTBOX	string	Indicates that the field uses a list box.
BINARY-ATTRIBUTE-RADIOBUTTON	string	Indicates that the field uses radio buttons.
BINARY-ATTRIBUTE-CHECKBOX	string	Indicates that the field uses check boxes.
BINARY-ATTRIBUTE-TRINARY	string	Indicates that the field uses a third value.

Usage

The Field-Attribute helps identify the selection mode for a Binary/Trinary field that is returned in the FieldSelectionHolder response. For more information, see [FieldSelectionsHolder \[page 197\]](#).

XML

The following XML shows Field-Attribute in the `<ae:attribute>` element as seen in the GetFieldSelectionsResponse.

```
<ae:GetFieldSelectionsResponse>
  <ae:return>
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Active/Inactive</ae:displayName>
      <ae:id>80</ae:id>
      <ae:uuid>e90174d9-76fa-4ac2-b2bd-13944626c685</ae:uuid>
      <ae:dbName>ACTIVEINACTIVE</ae:dbName>
    </ae:field>
    <ae:type>BINARY-SELECTION</ae:type>
    <ae:attribute>BINARY-ATTRIBUTE-LISTBOX</ae:attribute>
    <ae:option>
      <ae:id>
        <ae:displayName>Active</ae:displayName>
        <ae:id>0</ae:id>
      </ae:id>
      <ae:orderIndex>0</ae:orderIndex>
    </ae:option>
    <ae:option>
      <ae:id>
        <ae:displayName>Inactive</ae:displayName>
        <ae:id>1</ae:id>
      </ae:id>
      <ae:orderIndex>1</ae:orderIndex>
    </ae:option>
  </ae:return>
</ae:GetFieldSelectionsResponse>
```

FieldIdentifier

Description

The FieldIdentifier type holds the generic data for a field. The FieldIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a field.
dbName	string	The unique database field name.

Usage

The FieldIdentifier is the identifier that can be used in Web service methods to uniquely identify a field. The FieldIdentifier contains the generic information about a field (including the display name, ID, and UUID) in addition to the database field name information for the field.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows FieldIdentifier in the <urn:id> element in a typical call.

```
<urn:id>
  <urn:displayName>Actual Time to Fix</urn:displayName>
  <urn:id>59</urn:id>
  <urn:uuid>838fbaff-e74d-4d47-b415-85b502ea4676</urn:uuid>
  <urn:dbName>ACTUAL_TIME_TO_FIX</urn:dbName>
</urn:id>
```

FieldValue

Description

The FieldValue type holds generic identification information for a field value. The FieldValue parameters are listed below.

Parameters

Name	Type	Description
displayValue	string	The display name of the field value.
internalValue	string	The internal database name for the field value.
uuid	string	Alternate unique identifier for the field value.

Usage

FieldValue is used in combination with the Field argument to completely describe a field value pairing in FieldWithValue. For more information, see [FieldWithValue \[page 201\]](#).

XML

The following XML shows FieldValue in the `<urn:value>` element of the extendedField argument.

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>SINGLE SELECTION</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SINGLE_SELECTION</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>yellow</urn:displayValue>
    <urn:internalValue>77</urn:internalValue>
    <urn:uuid>2d16b39d-1be9-44a0-805c-1f9074c8ac35</urn:uuid>
  </urn:value>
</urn:extendedField>
```

FileAttachment

Description

The FileAttachment type holds the details of a file that is attached to an item. The FileAttachment type parameters are listed below.

Parameters

Name	Type	Description
id	integer	This is the internal TS_ID of the attachment from the TS_ATTACHMENTS table.
name	string	The name you give the attachment in SBM.
fileName	string	The name of the file as it exists on the file system.
showAsImage	boolean	This flag indicates whether or not graphic attachments are shown as images on forms.
modificationDateTime	dateTime	The date and time when the attachment was last modified. See Supported Date/Time Formats [page 386] for more information.
url	string	The URL for the attachment. The file can be downloaded from this URL.

Name	Type	Description
accessType	Attachment-Access-Type [page 96]	Shows the access type for the attachment. The value is either DEFAULT, RESTRICTED, or UNRESTRICTED.
extendedData	ExtendedData [page 162]	Placeholder for future arguments. Includes the size of the file attachment in fileAttachment responses.

Usage

FileAttachmentContents is inherited from FileAttachment. FileAttachment is used with FileAttachmentContents to completely describe a file attachment. The file attachment detail consists of an ID, name, and URL. With the URL, client code can download the file directly.

XML

The following XML snippet shows the FileAttachment type in the `<urn:fileAttachment>` parameter of TTIItem.

```

<urn:fileAttachment>
  <urn:id>39</urn:id>
  <urn:name>test</urn:name>
  <urn:fileName>wslog.txt</urn:fileName>
  <urn:showAsImage>>false</urn:showAsImage>
  <urn:modificationDateTime>2010-06-20T15:35:38-07:00
→</urn:modificationDateTime>
  <urn:url>http://server:80/tmtrack/tmtrack.dll?AttachmentPage
→&AttachmentID=39
  </urn:url>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
</urn:fileAttachment>

```

Sample response:

```

<ae:fileAttachment>
  <ae:id>45</ae:id>
  <ae:name>FileName</ae:name>
  <ae:fileName>fileName.dll</ae:fileName>
  <ae:showAsImage>>false</ae:showAsImage>
  <ae:modificationDateTime>2014-12-03T15:21:50-08:00</ae:modificationDateTime>
  <ae:url>http://serverName:80/tmtrack/tmtrack.dll?
→AttachmentPage&AttachmentID=45</ae:url>
  <ae:accessType>ATTACHACCESS-RESTRICTED</ae:accessType>
  <ae:extendedData>

```

```
<ae:data>
  <ae:name>fileSize</ae:name>
  <ae:value>126280</ae:value>
</ae:data>
</ae:extendedData>
</ae:fileAttachment>
```

FileAttachmentContents

Description

The FileAttachmentContents type holds the actual contents of a file that you upload to the server. The FileAttachmentContents type parameters are listed below.

Parameters

Name	Type	Description
contentsBase64	FileBufferBase64 [page 103]	Holds the base64 encoded contents of the file.

Usage

Inherited from FileAttachment. FileAttachmentContents is used with FileAttachment to completely describe a file attachment. For more information, see [FileAttachment \[page 101\]](#).

XML

See [FileBufferBase64 \[page 103\]](#).

FileBufferBase64

Description

The FileBufferBase64 type holds the actual contents of a file that you upload to the server in Base64. The FileBufferBase64 type parameters are listed below.

Parameters

Name	Type	Description
data	base64Binary	Holds the Base64 encoded contents of the file.

Usage

None.

XML

The following XML is a snippet of the FileBufferBase64 type.

```
<ae:GetFileAttachmentResponse>
  <ae:return xsi:type="ae:FileAttachmentContents">
```

```

    <ae:id>104</ae:id>
    <ae:name>my attachment</ae:name>
    <ae:fileName>fileName.txt</ae:fileName>
    <ae:showAsImage>false</ae:showAsImage>
    <ae:modificationDateTime>2010-09-17T18:46:25Z</ae:modificationDateTime>
    <ae:accessType>ATTACHACCESS-RESTRICTED</ae:accessType>
    <ae:contentsBase64>
      <ae:data>c2FtcGxlIGZpbGUgYXR0YWNobWVudA==</ae:data>
    </ae:contentsBase64>
  </ae:return>
</ae:GetFileAttachmentResponse>

```

FileContents

Description

The FileContents type holds the actual contents of a file returned from an Export operation or supplied to an Import operation. The FileContents type parameters are listed below.

Parameters

Name	Type	Description
contentsBase64	FileBufferBase64 [page 103]	Holds the base64 encoded contents of the file.

Usage

FileContents holds the actual contents of a file and is used to pass a file to or receive a file from the client.

XML

See [FileBufferBase64 \[page 103\]](#).

GrantState

Description

The GrantState enumeration describes privilege or role assignments for a user. The GrantState type parameters are listed below.

Parameters

Name	Type	Description
INHERITED	string	Denotes that the privilege is inherited from a parent entity.
REVOKED	string	Denotes that the privilege or role is disabled.
GRANTED	string	Denotes that the privilege or role is enabled.

Usage

Use the GrantState enumeration to enable, disable, or inherit privileges or role assignments. The GrantState enumeration is also returned by various calls that retrieve information about privileges or role assignments.

XML

The following XML shows GrantState in the <urn:access> element of the SetUserPrivileges call.

```
<urn:privilege>
  <urn:privilegeId>
    <urn:name>TS_USRPRJPRIV_DELETE</urn:name>
  </urn:privilegeId>
  <urn:access>GRANTED</urn:access>
  <urn:objectId>
    <urn:displayName>IM Project</urn:displayName>
  </urn:objectId>
</urn:privilege>
```

GroupIdentifier

Description

The GroupIdentifier type holds the identification information for a user group. The GroupIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a group.

Usage

The GroupIdentifier is the identifier that can be used in Web service methods to uniquely identify a group. The GroupIdentifier contains the generic information about a group (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows GroupIdentifier as seen in a typical call.

```
<urn:group>
  <urn:displayName>CR Submitters</urn:displayName>
  <urn:id>11</urn:id>
  <urn:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</urn:uuid>
</urn:group>
```

GroupIdentifierEx

Description

The GroupIdentifierEx type holds the identification information for one or more groups. The GroupIdentifierEx type parameters are listed below.

Parameters

Name	Type	Description
id	GroupIdentifier [page 105]	Holds the complete identification information for a group.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The GroupIdentifierEx type is used to uniquely identify one or more groups. The GroupIdentifierEx contains complete identification information about one or more groups (including display names, IDs, and UUIDs). GroupIdentifierEx is used to specify multiple groups in a single call or response.

XML

The following XML shows GroupIdentifierEx as seen in the GetGroupMembers call.

```
<urn:group>
  <urn:displayName>CR Submitters</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:group>
<urn:group>
  <urn:displayName>IDM Manager</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:group>
```

The following XML shows GroupIdentifierEx as seen in the GetGroupMembers response.

```
<ae:GetGroupMembersResponse>
  <ae:return>
    <ae:group>
      <ae:id xsi:type="ae:GroupIdentifier">
        <ae:displayName>IDM Manager</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>b2654094-0ec6-460d-856b-9b72709d183b</ae:uuid>
      </ae:id>
    </ae:group>
```

Identifier

Description

The Identifier type holds generic identification information. The Identifier type parameters are listed below.

Parameters

Name	Type	Description
displayName	string	The display name of the object.
id	integer	The TS_ID of the object.
uuid	string	An alternative unique identifier for the object.

Usage

The Identifier is a structure that contains generic identification information about an object in SBM. The identifier is a common set of parameters that are combined with other elements to uniquely define objects in the database. For example, the identifier element is used in combination with other elements like tableId, tableItemId, and issueId to uniquely describe an item in several different ways. The Identifier is used in the following common types:

- [ApplicationIdentifier \[page 95\]](#)
- [ContactIdentifier \[page 98\]](#)
- [FieldIdentifier \[page 99\]](#)
- [GroupIdentifier \[page 105\]](#)
- [ItemIdentifier \[page 108\]](#)
- [ProjectIdentifier \[page 114\]](#)
- [ReportIdentifier \[page 119\]](#)
- [SolutionIdentifier \[page 122\]](#)
- [StateIdentifier \[page 124\]](#)
- [TableIdentifier \[page 126\]](#)
- [TransitionIdentifier \[page 128\]](#)
- [UserIdentifier \[page 157\]](#)
- [WorkflowIdentifier \[page 158\]](#)



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows Identifier in the `<ae:report>` element of a typical call.

```
<urn:report>
  <urn:displayName>Change Requests By Issue</urn:displayName>
  <urn:id>8</urn:id>
  <urn:uuid>40e8bb61-14fe-409c-aa5e-6399cf3e26a8</urn:uuid>
</urn:report>
```

ItemIdentifier

Description

The ItemIdentifier type holds the identification information for an item. The ItemIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for an item.
tableID	integer	The TS_ID of the table that contains this item.
tableIdItemId	string	The TS_ID of the table, followed by the TS_ID of the item in that table (for example, 1000:164).
issueId	string	Item name for display purposes.

Usage

The ItemIdentifier is the identifier that can be used in Web service methods to uniquely identify an item. The ItemIdentifier contains the generic information about an item (including the display name, ID, and UUID) in addition to table ID and issue ID information for the item.



Note: You can send any one of the item elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object. You must provide either `tableIdItemId` or `tableid` in calls that take an ItemIdentifier as input (such as `GetItem`). This means you can use the `uuid`, `displayName`, or `issueId`, as long as you include `tableIdItemId` or `tableid` as well.

XML

The following XML shows ItemIdentifier as seen in a typical call.

```
<urn:item>
  <urn:displayName>BUG000059</urn:displayName>
```

```

<urn:id>25</urn:id>
<urn:uuid>7d4703a0-302d-4da3-891e-1d36d43613f2</urn:uuid>
<urn:tableId>1000</urn:tableId>
<urn:tableIdItemId>1000:25</urn:tableIdItemId>
<urn:issueId>000059</urn:issueId>
</urn:item>

```

ItemLink

Description

The ItemLink type holds information about an item link, which consists of an ItemIdentifier and the type of item link. The ItemLink type parameters are listed below.

Parameters

Name	Type	Description
id	integer	This is the internal TS_ID of the item link from the TS_ATTACHMENTS table.
itemID	ItemIdentifier [page 108]	The ID of the linked item.
linkType	ItemLink-Type [page 110]	Describes the type of item link. See ItemLink-Type [page 110] for a list of possible values.
modificationDateTime	dateTime	The date and time when the item link was last modified. See Supported Date/Time Formats [page 386] for more information.
accessType	Attachment-Access-Type [page 96]	Shows the access type for the item link. The value is either DEFAULT, RESTRICTED, or UNRESTRICTED.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The ItemLink type allows you to specify an item link to another item. The itemID element used uniquely identify a linked item.

XML

The following XML snippet shows the ItemLink type in the `<urn:itemLink>` parameter of TItem.

```

<urn:itemLink>
  <urn:id>52</urn:id>
  <urn:itemID>

```

```

    <urn:displayName>000220</urn:displayName>
    <urn:id>173</urn:id>
    <urn:uuid>0de24a1f-34a8-4f15-a72f-6ce923f0a212</urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:173</urn:tableIdItemId>
    <urn:issueId>000220</urn:issueId>
  </urn:itemID>
  <urn:linkType>DEFAULT-ITEM-LINK</urn:linkType>
  <urn:modificationDateTime>2008-03-11T22:17:12-07:00
  →</urn:modificationDateTime>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
</urn:itemLink>

```

ItemLink-Type

Description

The ItemLink-Type indicates the type of item link.

Parameters

Name	Type	Description
DEFAULT-ITEM-LINK	string	During creation of a new item link, the DEFAULT_ITEM_LINK is equivalent to TWOWAY_NO_TRIGGERS; otherwise, DEFAULT_ITEM_LINK indicates no type change. Note that returned item links always have DEFAULT_ITEM_LINK as the type.
TWOWAY-NO-TRIGGERS	string	Creates a two-way link between the current item and the selected item without Transition Triggers. This is the default link type.
ONEWAY-NO-TRIGGERS	string	Creates a one-way link from the current item to the selected item without Transition Triggers.
ONEWAY-CURRENT-TRIGGERS-LINKED	string	Creates a one-way link from the current item to the selected item. When the current item transitions, it also triggers the selected item to transition.
TWOWAY-CURRENT-TRIGGERS-LINKED	string	Creates a two-way link between the current item and the selected item. When the current item transitions, it also triggers the selected item to transition.

Name	Type	Description
TWOWAY-LINKED-TRIGGERS-CURRENT	string	Creates a two-way link between the current item and the selected item. When the selected item transitions, it also triggers the current item to transition.
TWOWAY-BOTH-TRIGGERS	string	Creates a two-way link between the current item and the selected item. When either item transitions, it also triggers the linked item to transition.

Usage

Linked items can trigger one another based on certain predefined actions defined in your workflow. You can specify a link type that triggers items, but triggers fire only if they are configured for your workflow.

XML

The following XML snippet shows ItemLink-Type in the <urn:linkType> element in a typical call.

```

<urn:itemLink>
  <urn:id>52</urn:id>
  <urn:itemID>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:173</urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:itemID>
  <urn:linkType>DEFAULT-ITEM-LINK</urn:linkType>
  <urn:modificationDateTime>2008-03-11T22:17:12-07:00
  →</urn:modificationDateTime>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
</urn:itemLink>

```

Note

Description

The Note type holds information about a note. The Note type parameters are listed below.

Parameters

Name	Type	Description
id	integer	This is the internal TS_ID of the note from the TS_ATTACHMENTS table.
title	string	The title of the note.
note	string	The text of the note.
author	UserIdentifier [page 157]	The author of the note.
modificationDateTime	dateTime	The date and time when the note was last modified. See Supported Date/Time Formats [page 386] for more information.
accessType	Attachment-Access-Type [page 96]	Shows the access type for the note. The value is either DEFAULT, RESTRICTED, or UNRESTRICTED.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The note title is limited to 255 unicode characters. The note body is limited to 65,535 characters.

XML

The following XML snippet shows the Note type in the `<urn:note>` parameter of TTIItem.

```
<urn:note>
  <urn:id>54</urn:id>
  <urn:title>Attention</urn:title>
  <urn:note>This is a note</urn:note>
  <urn:author>
    <urn:displayName>Administrator</urn:displayName>
    <urn:id>8</urn:id>
    <urn:uuid>9f9146a3-a273-4411-8000-8396688b7554</urn:uuid>
    <urn:loginId>admin</urn:loginId>
  </urn:author>
  <urn:modificationDateTime>2008-03-11T22:17:15-07:00
→</urn:modificationDateTime>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
</urn:note>
```





```
</urn:extendedData>  
</urn:note>
```

PrivilegeIdentifier

Description

The PrivilegeIdentifier type holds the identification information for a privilege. The PrivilegeIdentifier type parameters are listed below.

Parameters

Name	Type	Description
name	string	Holds the privilege name.  Note: The privilege name is mandatory, except for the following types: <ul style="list-style-type: none">• TS_FLDPRIVTYPE_ADMGRP• TS_FLDPRIVTYPE_ADMTBL• TS_FLDPRIVTYPE_ADMFLD
type	string	Holds the type of privilege.  Note: The privilege type is optional, except for the following types: <ul style="list-style-type: none">• TS_FLDPRIVTYPE_ADMGRP• TS_FLDPRIVTYPE_ADMTBL• TS_FLDPRIVTYPE_ADMFLD

Usage

The PrivilegeIdentifier is the identifier that can be used in Web service calls to uniquely identify a privilege. The PrivilegeIdentifier contains the privilege name and type.

XML

The following XML shows PrivilegeIdentifier as seen in the `<urn:privilegeName>` argument of a typical call.

```
<urn:HasGroupPrivilege>  
  <urn:auth>  
    <urn:userId>bill</urn:userId>  
    <urn:password>sa</urn:password>  
    <urn:hostname>localhost</urn:hostname>  
  </urn:auth>  
  <urn:privilegeName>TS_ADMSYSPRIV_GLOBALADMIN</urn:privilegeName>  
</urn:group>
```

```
    <urn:displayName>IM Administrator</urn:displayName>
  </urn:group>
</urn:HasGroupPrivilege>
```

The following XML shows PrivilegeIdentifier as seen in a typical response.

```
<ae:GetGroupPrivilegesResponse>
  <ae:return>
    <ae:name>TS_USRSYSPRIV_EDITPROFILE</ae:name>
    <ae:type>TS_PRIVTYPE_USERSYS</ae:type>
  </ae:return>
</ae:GetGroupPrivilegesResponse>
```

PrivilegeKind

Description

The PrivilegeKind enumeration describes a privilege as either an admin or user type of privilege. The PrivilegeKind type parameters are listed below.

Parameters

Name	Type	Description
USER-KIND	string	Denotes a user type of privilege.
ADMIN-KIND	string	Denotes an admin type of privilege.

Usage

All privileges in SBM are divided into two categories: user privileges and administrator privileges. The PrivilegeKind enumeration is used to make this distinction.

XML

The following XML shows PrivilegeKind in the `<urn:kind>` element of the `GetPrivilegeTypes` call.

```
<urn:GetPrivilegeTypes>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:kind>ADMIN-KIND</urn:kind>
</urn:GetPrivilegeTypes>
```

ProjectIdentifier

Description

The ProjectIdentifier type holds the identification information for a project. The ProjectIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107].	Generic identification extension base. Holds the displayName, id, and uuid for a project.
fullyQualifiedName	string	The fully qualified name of the project. Specifies the project name as it exists in the project hierarchy with respect to project inheritance. To specify the fully qualified name for a project, you start with the Base Project, followed by any other projects in the inheritance chain that lead to your ultimate project.
internalName	string	Holds the unique internal name of the project.

Usage

The ProjectIdentifier is the identifier that can be used in Web service methods to uniquely identify a project. The ProjectIdentifier contains the generic information about a project (including the display name, ID, and UUID) in addition to the fully qualified name and unique internal name.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows ProjectIdentifier as seen in a typical call.

```
<urn:project>
  <urn:displayName>Animation Pro</urn:displayName>
  <urn:id>2</urn:id>
  <urn:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</urn:uuid>
  <urn:fullyQualifiedName>Base Project||Base IDT Project||
  Software Development||Animation Pro</urn:fullyQualifiedName>
  <urn:internalName>TTT_ISSUES.ANIMATION_PRO</urn:internalName>
</urn:project>
```

QueryRange

Description

The QueryRange type allows you to limit the number of records returned in a query. The QueryRange type parameters are listed below.

Parameters

Name	Type	Description
startIndex	integer	This is the first record where the query should start.
fetchSize	integer	The fetchSize number is used to limit the number records that should be returned from the entire set of records in the totalCount.
totalCount	integer	The number of all the records in the query.

Usage

You can limit the number of reports returned in [GetReports \[page 63\]](#) using QueryRange. For example, if GetReports returns 20 items without a QueryRange, you can set startIndex to 5 and fetchSize to 7 to return reports 5 through 12 in the list of available reports. You can also apply QueryRange in the RunReport call to limit the number of records returned via the fetchSize.

XML

The following XML snippet shows QueryRange as seen in a typical call.

```
<urn:queryRange>
  <urn:startIndex>5</urn:startIndex>
  <urn:fetchSize>7</urn:fetchSize>
  <urn:totalCount></urn:totalCount>
</urn:queryRange>
```

ReportAccessLevel

Description

ReportAccessLevel is used to describe the access level assigned to a report. The available report access levels are listed below.

Parameters

Name	Type	Description
PRIVATE	string	This access level enables individual users to manage reports they create. Only the user who creates a private report can access, modify, or delete private reports and only if this user is granted "Manage Private Reports" privileges.
GUEST	string	This access level denotes a guest-level report. Users with guest-level report privileges can perform report actions for guest-level reports.

Name	Type	Description
USER	string	This access level denotes a user-level report. Users with user-level report privileges can perform report actions for user-level reports.
MANAGER	string	This access level denotes a manager-level report. Users with manager-level report privileges can perform report actions for manager-level reports.

Usage

ReportAccessLevel is used to limit the reports returned in the reportsFilter argument of the GetReports call. If ReportAccessLevel is not specified, the GetReports response will not be limited by any type of access level. See [ReportsFilter \[page 173\]](#) for further usage.

XML

The following XML snippet shows ReportAccessLevel as seen in a typical call.

```

<urn:reportsFilter>
  <urn:solution></urn:solution>
  <urn:project>
    <urn:displayName></urn:displayName>
    <urn:id>4</urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:project>
  <urn:table>
    <urn:displayName></urn:displayName>
    <urn:id>1000</urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
  </urn:table>
  <urn:author></urn:author>
  <urn:reportType>LISTING</urn:reportType>
  <urn:reportCategory>ALL</urn:reportCategory>
  <urn:reportAccessLevel>USER</urn:reportAccessLevel>
  <urn:report>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:report>
  <urn:searchByName>ALL</urn:searchByName>
  <urn:includeSubProjects>true</urn:includeSubProjects>
  <urn:createdDateFrom>2007-06-20T15:35:38-07:00</urn:createdDateFrom>
  <urn:createdDateTo>2007-07-20T15:35:38-07:00</urn:createdDateTo>
</urn:reportsFilter>

```

ReportCategory

Description

ReportCategory is used to describe a grouping of reports. The available report categories are listed below.

Parameters

Name	Type	Description
ALL	string	This is the default ReportCategory. No filter is applied and all reports should be returned.
APPLICATION	string	Return only Application Reports (process app-specific listing reports designed in SBM Composer).
BUILTIN	string	Return only built-in reports.
MY	string	Return all reports that you have authored.
QUICKLINKS	string	Return only reports that are saved as Quick Links.
USERREPORTS	string	Return all reports, with the exception of built-in reports.

Usage

ReportCategory is used to limit the reports returned in the reportsFilter argument of the GetReports call. The default setting is "ALL" which will returns all reports (no filter is applied via this parameter in that case). See [ReportsFilter \[page 173\]](#) for further usage.

XML

The following XML snippet shows ReportCategory as seen in a typical call.

```
<urn:reportsFilter>
  <urn:solution>
    <urn:displayName></urn:displayName>
    <urn:id>1</urn:id>
    <urn:uuid></urn:uuid>
    <urn:uniqueName>BASE_ISSUE_DEFECT_TRACKING</urn:uniqueName>
    <urn:tabName></urn:tabName>
  </urn:solution>
  <urn:project>
    <urn:displayName></urn:displayName>
    <urn:id>4</urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:project>
  <urn:table>
    <urn:displayName></urn:displayName>
    <urn:id>1000</urn:id>
    <urn:uuid></urn:uuid>
```

```

        <urn:dbName></urn:dbName>
    </urn:table>
    <urn:author></urn:author>
    <urn:reportType>LISTING</urn:reportType>
    <urn:reportCategory>ALL</urn:reportCategory>
    <urn:reportAccessLevel>USER</urn:reportAccessLevel>
    <urn:report>
        <urn:displayName></urn:displayName>
        <urn:id></urn:id>
        <urn:uuid></urn:uuid>
    </urn:report>
    <urn:searchByName>ALL</urn:searchByName>
    <urn:includeSubProjects>true</urn:includeSubProjects>
    <urn:createdDateFrom>2007-06-20T15:35:38-07:00</urn:createdDateFrom>
    <urn:createdDateTo>2007-07-20T15:35:38-07:00</urn:createdDateTo>
</urn:reportsFilter>

```

ReportIdentifier

Description

The ReportIdentifier type holds the identification information for a report. The ReportIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a report.

Usage

The ReportIdentifier is the identifier that can be used in Web service methods to uniquely identify a report. The ReportIdentifier contains the generic information about a report (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows ReportIdentifier as seen in a typical call.

```

<urn:report>
  <urn:displayName>Change Requests By Issue</urn:displayName>
  <urn:id>8</urn:id>
  <urn:uuid>40e8bb61-14fe-409c-aa5e-6399cf3e26a8</urn:uuid>
</urn:report>

```

ReportType

Description

ReportType is used to describe the type of report. The available report types are listed below.

Parameters

Name	Type	Description
LISTING	string	Indicates a Listing report type.
ALLTYPES	string	Returns all available report types.

Usage

ReportType is used to limit the types of reports returned in the reportsFilter argument of the GetReports call. The default setting is "1" or "LISTING" to indicate a Listing report. See [ReportsFilter \[page 173\]](#) for further usage.

XML

The following XML snippet shows ReportType as seen in a typical call.

```
<urn:reportsFilter>
  <urn:solution>
    <urn:displayName></urn:displayName>
    <urn:id>1</urn:id>
    <urn:uuid></urn:uuid>
    <urn:uniqueName>BASE_ISSUE_DEFECT_TRACKING</urn:uniqueName>
    <urn:tabName></urn:tabName>
  </urn:solution>
  <urn:project>
    <urn:displayName></urn:displayName>
    <urn:id>4</urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:project>
  <urn:table>
    <urn:displayName></urn:displayName>
    <urn:id>1000</urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
  </urn:table>
  <urn:author></urn:author>
  <urn:reportType>LISTING</urn:reportType>
  <urn:reportCategory>ALL</urn:reportCategory>
  <urn:reportAccessLevel>USER</urn:reportAccessLevel>
  <urn:report>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:report>
  <urn:searchByName>ALL</urn:searchByName>
```

```
<urn:includeSubProjects>true</urn:includeSubProjects>
<urn:createdDateFrom>2007-06-20T15:35:38-07:00</urn:createdDateFrom>
<urn:createdDateTo>2007-07-20T15:35:38-07:00</urn:createdDateTo>
</urn:reportsFilter>
```

RoleIdentifier

Description

The RoleIdentifier type holds the identification information for a role. The RoleIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a role.
projectId	ProjectIdentifier [page 114]	Holds the identification information for a project.

Usage

The RoleIdentifier is the identifier that can be used in Web service methods to uniquely identify a role. The RoleIdentifier contains the generic information about a role (including the display name, ID, and UUID) in addition to the associated project.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows RoleIdentifier as seen in a typical call.

```
<urn:role>
  <urn:id>
    <urn:displayName>IDM Administrator</urn:displayName>
    <urn:projectId>
      <urn:displayName>IDM Project</urn:displayName>
    </urn:projectId>
  </urn:id>
  <urn:access>REVOKED</urn:access>
</urn:role>
```

Selection-Type

Description

Selection-Type indicates the type of field selection.

Parameters

Name	Type	Description
SINGLE-SELECTION	string	Indicates that the field is a <i>Single Selection</i> field type.
BINARY-SELECTION	string	Indicates that the field is a <i>Binary/Trinary</i> field type.
MULTI-SELECTION	string	Indicates that the field is a <i>Multi-Selection</i> field type.

Usage

The Selection-Type helps identify the type of field selection that is returned in the FieldSelectionHolder response. For more information, see [FieldSelectionsHolder \[page 197\]](#).

XML

The following XML shows Selection-Type in the `<ae:type>` element as seen in the GetFieldSelectionsResponse.

```
<ae:GetFieldSelectionsResponse>
  <ae:return>
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Active/Inactive</ae:displayName>
      <ae:id>80</ae:id>
      <ae:uuid>e90174d9-76fa-4ac2-b2bd-13944626c685</ae:uuid>
      <ae:dbName>ACTIVEINACTIVE</ae:dbName>
    </ae:field>
    <ae:type>BINARY-SELECTION</ae:type>
    <ae:attribute>BINARY-ATTRIBUTE-LISTBOX</ae:attribute>
    <ae:option>
      <ae:id>
        <ae:displayName>Active</ae:displayName>
        <ae:id>0</ae:id>
      </ae:id>
      <ae:orderIndex>0</ae:orderIndex>
    </ae:option>
    <ae:option>
      <ae:id>
        <ae:displayName>Inactive</ae:displayName>
        <ae:id>1</ae:id>
      </ae:id>
      <ae:orderIndex>1</ae:orderIndex>
    </ae:option>
  </ae:return>
```

SolutionIdentifier

Description

The SolutionIdentifier type holds the identification information for a solution. The SolutionIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a solution.
uniqueName	string	The database name of the solution.
tabName	string	The tab name setting specified in SBM Composer.

Usage

The SolutionIdentifier is the identifier that you use in Web service methods to uniquely identify a solution. The SolutionIdentifier contains the generic information about a solution (including the display name, ID, and UUID) in addition to the database name and application tab name.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows SolutionIdentifier as seen in a typical call.

```
<urn:solution>
  <urn:displayName>Issue Defect Management</urn:displayName>
  <urn:id>1</urn:id>
  <urn:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</urn:uuid>
  <urn:uniqueName>ISSUE_DEFECT_MANAGEMENT</urn:uniqueName>
  <urn:tabName>IDM</urn:tabName>
</urn:solution>
```

Solution-Type

Description

Solution-Type indicates the type of solution.

Parameters

Name	Type	Description
TEAMTRACK-SOLUTION	string	Indicates that the solution was created by SBM developers.
USER-SOLUTION	string	Indicates that the solution was created by a user.

Name	Type	Description
THIRDPARTY-SOLUTION	string	Indicates that the solution was created by a third party.

Usage

The Solution-Type helps identify the type of solution returned in the SolutionData response. For more information, see [SolutionData \[page 226\]](#).

XML

The following XML shows Solution-Type as seen in a typical response.

```
<ae:GetSolutionsResponse>
  <ae:return>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Issue Defect Management</ae:displayName>
      <ae:id>1</ae:id>
      <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
      <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
      <ae:tabName>IDM</ae:tabName>
    </ae:solution>
    <ae:type>USER-SOLUTION</ae:type>
    <ae:prefix>UBG</ae:prefix>
    <ae:description>Last updated 1/26/09</ae:description>
  </ae:return>
```

StateIdentifier

Description

The StateIdentifier type holds the identification information for a state. The StateIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a state.
internalName	string	Holds the unique internal name of the state. This value is set by SBM Composer and cannot be changed once it has been set and published.
isClosed	boolean	Boolean value to indicate if the state is active or inactive.

Usage

The StateIdentifier is the identifier that can be used in Web service methods to uniquely identify a state. The StateIdentifier contains generic information about a state (including the display name, ID, and UUID), the unique internal name of the state, and the state's active or inactive status.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows StateIdentifier as seen in a typical call.

```
<urn:state>
  <urn:displayName>Evaluating Issue</urn:displayName>
  <urn:id>1</urn:id>
  <urn:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</urn:uuid>
  <urn:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</urn:internalName>
  <urn:isClosed>>false</urn:isClosed>
</urn:state>
```

Subtasks

Description

The Subtasks type holds information about a subtask relationship. The Subtasks type is used only for informational purposes in the TTItem response. The Subtasks type parameters are listed below.

Parameters

Name	Type	Description
parentItemId	ItemIdentifier [page 108]	Identifies the parent item.
subtask	ItemIdentifier [page 108]	Identifies the subtask item.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The Subtasks type contains the parent and child items that exist in a subtask relationship. The Subtasks type is returned in the TTItem response to inform you about subtask relationships on returned items. The Subtasks argument is left empty in the CreatePrimaryItems, CreateAuxiliaryItems, and TransitionItems calls. Instead, you must use the LinkSubtask call to create subtask relationships between items.

XML

The following XML shows the parent and subtask items in the `<ae:subtasks>` parameter of two separate TTItem responses. In this example, a subtask relationship was created using the LinkSubtask call, followed by a GetItems call against each item in the relationship.

GetItems against the parent item (where the TS_ID of the parent is 74) returns:

```
<ae:subtasks>
  <ae:subtask xsi:type="ae:ItemIdentifier">
    <ae:displayName>HRD000196</ae:displayName>
    <ae:id>75</ae:id>
    <ae:uuid>79e8af21-760d-44a4-af84-aec56935f88f</ae:uuid>
    <ae:tableId>1002</ae:tableId>
    <ae:tableIdItemId>1002:75</ae:tableIdItemId>
    <ae:issueId>000196</ae:issueId>
  </ae:subtask>
</ae:subtasks>
```

GetItems against the child item (where the TS_ID of the child is 75) returns:

```
<ae:subtasks>
  <ae:parentItemId xsi:type="ae:ItemIdentifier">
    <ae:displayName>HRD000195</ae:displayName>
    <ae:id>74</ae:id>
    <ae:uuid>5bf6642c-da90-436a-9fd6-2ec06363cdd0</ae:uuid>
    <ae:tableId>1002</ae:tableId>
    <ae:tableIdItemId>1002:74</ae:tableIdItemId>
    <ae:issueId>000195</ae:issueId>
  </ae:parentItemId>
</ae:subtasks>
```

TableIdentifier

Description

The TableIdentifier type holds the identification information for a table. The TableIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a table.
dbName	string	The unique database name of the table

Usage

The TableIdentifier is the identifier that can be used in Web service methods to uniquely identify a table. The TableIdentifier contains the generic information about a table (including the display name, ID, and UUID) in addition to the database name of the table.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows TableIdentifier as seen in a typical call.

```
<urn:table>
  <urn:displayName>Issues</urn:displayName>
  <urn:id>1000</urn:id>
  <urn:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</urn:uuid>
  <urn:dbName>UBG_ISSUES</urn:dbName>
</urn:table>
```

Table-Type

Description

Table-Type indicates the type of table. The available table types are listed below.

Parameters

Name	Type	Description
NOT-SPECIFIED	string	Used to not specify a table type.
SYSTEM-TABLE	string	A table type that is inherent to any SBM database.
PRIMARY-TABLE	string	A table that stores information about primary items, which follow an application workflow process.
AUXILIARY-TABLE	string	A table that stores information that may be needed repeatedly. Stores records that do not follow an application workflow process.
SYSTEM-AUXILIARY-TABLE	string	An built-in auxiliary table provided by SBM
ARCHIVE-TABLE	string	A built-in table used to store archived primary or auxiliary records.

Usage

Table-Type can be used to limit the types of tables returned in [GetTables \[page 69\]](#). It can also be used to identify the type of table returned in the GetTables response.



Note: The SYSTEM-TABLE and ARCHIVE-TABLE parameters are not currently implemented and will not return results when used in a GetTables call.

XML

The following XML shows Table-Type as seen in the type element of a GetTables response.

```
<ae:GetTablesResponse>
  <ae:return>
    <ae:table xsi:type="ae:TableIdentifier">
```

```

    <ae:displayName>Issues</ae:displayName>
    <ae:id>1000</ae:id>
    <ae:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</ae:uuid>
    <ae:dbName>UBG_ISSUES</ae:dbName>
  </ae:table>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Issue Defect Management</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
    <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
    <ae:tabName>IDM</ae:tabName>
  </ae:solution>
</ae:type>PRIMARY-TABLE</ae:type>

```

TransitionIdentifier

Description

The TransitionIdentifier type holds the identification information for a transition. The TransitionIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a transition.
internalName	string	Holds the unique internal name of the transition. This value is set by SBM Composer and cannot be changed once it has been set and published.

Usage

The TransitionIdentifier is the identifier that can be used in Web service methods to uniquely identify a transition. The TransitionIdentifier contains generic information about a transition (including the display name, ID, and UUID) and the unique internal name of the transition.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows TransitionIdentifier as seen in a typical call.

```

<urn:transition>
  <urn:displayName>Approve</urn:displayName>
  <urn:id>4</urn:id>
  <urn:uuid>a78f0a30-1305-46c2-b661-df8219c105b2</urn:uuid>

```

```
<urn:internalName>SOFTWARE_ISSUES.APPROVE</urn:internalName>
</urn:transition>
```

Transition-Style

Description

Transition-Style indicates the style of transitions in the graphical workflow.

Parameters

Name	Type	Description
STYLE-STRAIGHT	string	Used when a transition line is straight.
STYLE-ARC	string	Used when a transition is arced.
STYLE-POLYLINE	string	Used when a transition line is angled.

Usage

The Transition-Style identifies the visual style of transitions in the graphical workflow. For more information, see [GetWorkflows \[page 74\]](#).

XML

The following XML shows Transition-Style in the `<ae:style>` element as seen in the `GetWorkflowsResponse`.

```
<ae:transition>
  <ae:id xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Delete</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>delete</ae:uuid>
    <ae:internalName>DELETE</ae:internalName>
  </ae:id>
  <ae:style>STYLE-STRAIGHT</ae:style>
  <ae:point>
    <ae:x>-31</ae:x>
    <ae:y>-406</ae:y>
  </ae:point>
  <ae:point>
    <ae:x>-31</ae:x>
    <ae:y>-519</ae:y>
  </ae:point>
  <ae:styleClass>NormalPath</ae:styleClass>
  <ae:labelPosition>
    <ae:x>-31</ae:x>
    <ae:y>-444</ae:y>
  </ae:labelPosition>
</ae:transition>
```

Transition-Type

Description

Transition-Type indicates the type of transition. The available transition types are listed below.

Parameters

Name	Type	Description
TRANSITION-REGULAR	string	Denotes a Regular transition.
TRANSITION-COPY	string	Denotes a Copy transition.
TRANSITION-POST	string	Denotes a Post transition that submits a record into an application table based on the transition of a primary item.
TRANSITION-SUBMITPROBLEM	string	Denotes a Publish transition that creates a Knowledge Base problem or resolution.
TRANSITION-MOBILE	string	Denotes a transition that is available to Mobile Connect users.
TRANSITION-SUBTASK	string	Denotes a transition that creates a Subtask.
TRANSITION-UPDATE	string	Denotes an Update transition.
TRANSITION-DELETE	string	Denotes a Delete transition.
TRANSITION-EXTERNALPOST	string	Denotes a transition that will submit a record into an external database by sending an email message to perform a special kind of e-mail submission.

Usage

Transition-Type is used to describe the types of transition returned in the Transition response returned from the various GetTransition calls. For more information see [GetAvailableTransitions \[page 50\]](#).

XML

The following XML shows Transition-Type as seen in the type element of a GetAvailableTransitionsResponse.

```
<ae:GetAvailableTransitionsResponse>
  <ae:return>
```

```

<ae:transition xsi:type="ae:TransitionIdentifier">
  <ae:displayName>Fix</ae:displayName>
  <ae:id>8</ae:id>
  <ae:uuid>7d095afe-1679-4e68-b492-0ad574bcdb2b</ae:uuid>
  <ae:internalName>SOFTWARE_ISSUES.FIX</ae:internalName>
</ae:transition>
<ae:fromState xsi:type="ae:StateIdentifier">
  <ae:displayName>Evaluating Issue</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</ae:uuid>
  <ae:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</ae:internalName>
  <ae:isClosed>>false</ae:isClosed>
</ae:fromState>
<ae:toState xsi:type="ae:StateIdentifier">
  <ae:displayName>Fixing Issue</ae:displayName>
  <ae:id>4</ae:id>
  <ae:uuid>a555a40c-7554-46f2-80bb-a6ff8b9ec917</ae:uuid>
  <ae:internalName>SOFTWARE_ISSUES.FIXING_ISSUE</ae:internalName>
  <ae:isClosed>>false</ae:isClosed>
</ae:toState>
<ae:type>TRANSITION-REGULAR</ae:type>
</ae:return>
<ae:return>
  <ae:transition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Need More Info</ae:displayName>
    <ae:id>4</ae:id>
    <ae:uuid>c2abdb46-47fa-46e3-a5f2-b90a401668e9</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.NEED_MORE_INFO</ae:internalName>
  </ae:transition>
  <ae:fromState xsi:type="ae:StateIdentifier">
    <ae:displayName>Evaluating Issue</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</ae:internalName>
    <ae:isClosed>>false</ae:isClosed>
  </ae:fromState>
  <ae:toState xsi:type="ae:StateIdentifier">
    <ae:displayName>Returned</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>2b2f2218-5d29-403d-b7e2-779d14b111b4</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.RETURNED</ae:internalName>
    <ae:isClosed>>false</ae:isClosed>
  </ae:toState>
  <ae:type>TRANSITION-REGULAR</ae:type>
</ae:return>
<ae:return>
  <ae:transition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Defer</ae:displayName>
    <ae:id>6</ae:id>
    <ae:uuid>ef75fd06-3a00-4e14-a1f9-e9b7b9c5d340</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.DEFER</ae:internalName>
  </ae:transition>
  <ae:fromState xsi:type="ae:StateIdentifier">
    <ae:displayName>Evaluating Issue</ae:displayName>
    <ae:id>1</ae:id>

```

```
    <ae:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</ae:internalName>
    <ae:isClosed>>false</ae:isClosed>
  </ae:fromState>
  <ae:toState xsi:type="ae:StateIdentifier">
    <ae:displayName>Deferred</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>65b066a7-45f8-49cc-b5f4-0237f2fd3a2f</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.DEFERRED</ae:internalName>
    <ae:isClosed>>true</ae:isClosed>
  </ae:toState>
  <ae:type>TRANSITION-REGULAR</ae:type>
</ae:return>
<ae:return>
  <ae:transition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Copy</ae:displayName>
    <ae:id>19</ae:id>
    <ae:uuid>34e41d1a-9e30-4811-ad40-202bd397ea68</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.COPY</ae:internalName>
  </ae:transition>
  <ae:type>TRANSITION-COPY</ae:type>
</ae:return>
<ae:return>
  <ae:transition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Close</ae:displayName>
    <ae:id>20</ae:id>
    <ae:uuid>970ae164-c2fb-4709-8539-7f295add3de</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.CLOSE</ae:internalName>
  </ae:transition>
  <ae:fromState xsi:type="ae:StateIdentifier">
    <ae:displayName>Evaluating Issue</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</ae:internalName>
    <ae:isClosed>>false</ae:isClosed>
  </ae:fromState>
  <ae:toState xsi:type="ae:StateIdentifier">
    <ae:displayName>Resolved</ae:displayName>
    <ae:id>7</ae:id>
    <ae:uuid>ea57582f-5c62-4bcd-b250-5e21cad308e3</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.RESOLVED</ae:internalName>
    <ae:isClosed>>true</ae:isClosed>
  </ae:toState>
  <ae:type>TRANSITION-REGULAR</ae:type>
</ae:return>
<ae:return>
  <ae:transition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>P4 Update</ae:displayName>
    <ae:id>66</ae:id>
    <ae:uuid>e3a41611-f1e3-4a94-bc54-304f0fcd2227</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.P4_UPDATE</ae:internalName>
  </ae:transition>
  <ae:type>TRANSITION-REGULAR</ae:type>
</ae:return>
<ae:return>
```

```

<ae:transition xsi:type="ae:TransitionIdentifier">
  <ae:displayName>Update</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>e3a41611-f1e3-4a94-bc56-934f0fcd2290</ae:uuid>
  <ae:internalName>SOFTWARE_ISSUES.UPDATE</ae:internalName>
</ae:transition>
<ae:type>TRANSITION-UPDATE</ae:type>
</ae:return>
<ae:return>
  <ae:transition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Delete</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>delete</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.DELETE</ae:internalName>
  </ae:transition>
  <ae:type>TRANSITION-DELETE</ae:type>
</ae:return>
</ae:GetAvailableTransitionsResponse>

```

TTItem

Description

The TTItem type holds all of the SBM field information for an item along with attached notes and item links. The TTItem type parameters are listed below.

Parameters

Name	Type	Description
id	ItemIdentifier [page 108]	Holds the identification information for an item.
itemType	string	Describes items, such as Defects or Change Requests, tracked in a workflow.
project	ProjectIdentifier [page 114]	Holds the identification information for the item's project.
title	string	The 80 character fixed length title of the item.
description	string	A description of the item. This is the value given to the system Description field, which is a Text/Memo field.
createdBy	UserIdentifier [page 157]	Holds the identification information for the user who created the item.
createDate	dateTime	The date the item was created. See Supported Date/Time Formats [page 386] for more information.

Name	Type	Description
modifiedBy	UserIdentifier [page 157]	Holds the identification information of the user who last modified the item.
modifiedDate	dateTime	The date and time when the item was last modified. See Supported Date/Time Formats [page 386] for more information.
activeInactive	string	Indicates whether the item is active (true) or inactive (false). Defaults to true.
state	StateIdentifier [page 124]	Holds the identification information of the current state of the item.
owner	UserIdentifier [page 157]	Holds the identification information of the user who currently owns the item.
url	string	The exact URL of the item.
extendedField	NameValue [page 168]	Additional fields and values not otherwise specified in TTIItem are set using the extendedField element.
note	Note [page 111]	The list of notes attached to the item.
itemLink	ItemLink [page 109]	The list of items linked to this item.
urlAttachment	URLAttachment [page 155]	The list of URL attachments associated with this item.
fileAttachment	FileAttachment [page 101]	The list of file attachments associated with this item.
subtasks	Subtasks [page 125]	Holds information about an existing subtask relationship. Left empty when sent as an argument. Used only for informational purposes in a TTIItem response.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The TTIItem type is essentially used describe the fields of an auxiliary or primary item in SBM. The following TTIItem parameters are described in further detail:

- **itemType** – The itemType parameter is used to describe the item. The available values for itemType are derived from selections in the Item Type field. When you create an Item Type value in SBM Composer, you create a value and assign it a

prefix. In the itemType parameter, you enter only the value, not the prefix. See the XML sample below for an example. Item Type is only applicable to primary table items.

- **project** – The project parameter is used to assign an item to a project. When creating items using Web services, make sure the proper project is used with respect to the itemType, state, and owner. Note that the project parameter is only applicable to primary table items.
- **state** – The available states for an item are determined by the project the item is in. If you change the value of the state field for a specific item, you are also moving that item to the specified state in the workflow and it could follow a different process than you intended. If not specified, the initial state is the default. State is only applicable to primary table items.
- **owner** – The available owner of an item is determined by the state the item is in. If not explicitly set, the value for owner will be derived from the value of the user field designated as the owner of the state. Owner is only applicable to primary table items.
- **url** – The detailed view of the item can be accessed via this URL. The URL is of the form "tmtrack.dll?IssuePage&RecordId=10&Template=view&TableId=1002", so the "http://host:port/tmtrack/" must be pre-pended.



Tip: In responses that contain TTItem, the host name in the <ae:url> element is determined by the **Web server** value that is specified for the Notification Server in SBM Configurator.

- **extendedField** – The extendedField is a collection of fields and field values that aren't specifically set elsewhere in TTItem. The XML example below shows each field type in SBM, sent via TTitem in a CreatePrimaryItems call. The example shows how the data for each field type should be entered, using either the display or internal value. Both the display and internal values are shown in the example, though you can specify either the display, internal, or UUID value instead. Note that Multi-Select and Multi-Relational fields are included as well, with each value being sent in its own element.



Tip: In order to create a new auxiliary or primary item with a file attachment, that attachment must exist in the TS_ATTACHMENTS table of SBM already. Otherwise, you can use CreateFileAttachment after the item has been created to associate it with a new attachment that isn't already in TS_ATTACHMENTS.

XML

The following XML shows TTitem as seen in the CreatePrimaryItems call. Throughout the extendedFields in this example, all of the SBM field types are used in the name element to illustrate how to format the data for that given field type.

```
<urn:CreatePrimaryItems>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
```

```
<urn:project>
  <urn:displayName>Animation Pro</urn:displayName>
  <urn:id>6</urn:id>
  <urn:uuid></urn:uuid>
  <urn:fullyQualifiedName>Base Project||Base IDT Project||
  Software Development||Animation Pro</urn:fullyQualifiedName>
  <urn:internalName>TTT_ISSUES.ANIMATION_PRO</urn:internalName>
</urn:project>
<urn:parentItem></urn:parentItem>
<urn:item>
  <urn:id>
    <urn:displayName>000230</urn:displayName>
    <urn:id>196</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:196</urn:tableIdItemId>
    <urn:issueId>000230</urn:issueId>
  </urn:id>
  <urn:itemType></urn:itemType>
  <urn:project>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
    <urn:internalName></urn:internalName>
  </urn:project>
  <urn:title>Test Item for TTItem</urn:title>
  <urn:description>This is the item description.</urn:description>
  <urn:createdBy>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:createdBy>
  <urn:createDate></urn:createDate>
  <urn:modifiedBy>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:modifiedBy>
  <urn:modifiedDate></urn:modifiedDate>
  <urn:activeInactive></urn:activeInactive>
  <urn:state>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:isClosed></urn:isClosed>
  </urn:state>
  <urn:owner>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:owner>
```

```

<urn:url></urn:url>
<urn:extendedField>
  <urn:id>
    <urn:displayName>BINARY TRINARY</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>BINARY_TRINARY</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>True</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>DATE AND TIME</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>DATE_AND_TIME</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>2010-05-01T06:00:00+00:00</urn:displayValue>
    <urn:internalValue>2010-05-01T06:00:00+00:00</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>DATE ONLY</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>DATE_ONLY</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>2010-05-01</urn:displayValue>
    <urn:internalValue>2008-05-01T00:00:00+00:00</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>TIME OF DAY</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>TIME_OF_DAY</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>

```

```
<urn:value>
  <urn:displayValue>17:36:39</urn:displayValue>
  <urn:internalValue>63399</urn:internalValue>
  <urn:uuid></urn:uuid>
</urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>ELAPSED TIME</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>ELAPSED_TIME</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>7 17:36:39</urn:displayValue>
    <urn:internalValue>668199</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>FOLDER</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>FOLDER</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>InBox</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>MULTI GROUP</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>MULTI_GROUP</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>IDM Administrator</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>IDM Team</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
```

```

</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>MULTI_RELATIONAL</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>MULTI_RELATIONAL</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>App1 - test123</urn:displayValue>
    <urn:internalValue>1004:1</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>App2 - field456</urn:displayValue>
    <urn:internalValue>1004:2</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>MULTI_SELECTION</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>MULTI_SELECTION</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>red</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>blue</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>green</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>MULTI_USER</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>MULTI_USER</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>

```

```
<urn:value>
  <urn:displayValue>admin</urn:displayValue>
  <urn:internalValue></urn:internalValue>
  <urn:uuid></urn:uuid>
</urn:value>
<urn:value>
  <urn:displayValue>bill</urn:displayValue>
  <urn:internalValue></urn:internalValue>
  <urn:uuid></urn:uuid>
</urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>NUMERIC</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>NUMERIC</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>55</urn:displayValue>
    <urn:internalValue>55</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>SINGLE RELATIONAL</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SINGLE_RELATIONAL</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>App1 - test123</urn:displayValue>
    <urn:internalValue>1004:1</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>SINGLE SELECTION</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SINGLE_SELECTION</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>yellow</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
```

```

</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>NUMERIC 2 FOR SUM</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>NUMERIC_2_FOR_SUM</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>10</urn:displayValue>
    <urn:internalValue>10</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>SUMMATION</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SUMMATION</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue></urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>TEXT</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>TEXT</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>
  <urn:value>
    <urn:displayValue>This is some text.</urn:displayValue>
    <urn:internalValue>This is some text.</urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>USER</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>USER</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod></urn:setValueMethod>

```

```
<urn:value>
  <urn:displayValue>carmen</urn:displayValue>
  <urn:internalValue></urn:internalValue>
  <urn:uuid></urn:uuid>
</urn:value>
</urn:extendedField>
<urn:note>
  <urn:id></urn:id>
  <urn:title>Note Title</urn:title>
  <urn:note>this is a note</urn:note>
  <urn:author>
    <urn:displayName>admin</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:author>
  <urn:modificationDateTime></urn:modificationDateTime>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
</urn:note>
<urn:itemLink>
  <urn:id></urn:id>
  <urn:itemID>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId>1000:190</urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:itemID>
  <urn:linkType>DEFAULT-ITEM-LINK</urn:linkType>
  <urn:modificationDateTime></urn:modificationDateTime>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
</urn:itemLink>
<urn:fileAttachment>
  <urn:id></urn:id>
  <urn:name></urn:name>
  <urn:fileName></urn:fileName>
  <urn:showAsImage></urn:showAsImage>
  <urn:modificationDateTime></urn:modificationDateTime>
  <urn:url></urn:url>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
</urn:fileAttachment>
<urn:subtasks/>
</urn:item>
<urn:submitTransition>
  <urn:displayName></urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:submitTransition>
<urn:options>
  <urn:extraOption></urn:extraOption>
  <urn:multiOption>STOP-ON-FAILURE</urn:multiOption>
  <urn:sections>SECTIONS-ALL</urn:sections>
  <urn:specifiedSections></urn:specifiedSections>
  <urn:limitedField></urn:limitedField>
```

```
</urn:options>
</urn:CreatePrimaryItems>
```

The following XML shows TItem as seen in the CreatePrimaryItems response:

```
<ae:CreatePrimaryItemsResponse>
  <ae:return>
    <ae:item>
      <ae:id xsi:type="ae:ItemIdentifier">
        <ae:displayName>000230</ae:displayName>
        <ae:id>196</ae:id>
        <ae:uuid>fafaf647-22f5-4579-b60c-3f90e61bdcf0</ae:uuid>
        <ae:tableId>1000</ae:tableId>
        <ae:tableIdItemId>1000:196</ae:tableIdItemId>
        <ae:issueId>000230</ae:issueId>
      </ae:id>
      <ae:itemType/>
      <ae:project xsi:type="ae:ProjectIdentifier">
        <ae:displayName>Animation Pro</ae:displayName>
        <ae:id>6</ae:id>
        <ae:uuid>2ac5ef27-71da-4b07-ab7e-dddbc9c2d8c7</ae:uuid>
        <ae:fullyQualifiedName>Base Project||Base IDT Project||
          Software Development||Animation Pro</ae:fullyQualifiedName>
        <ae:internalName>TTT_ISSUES.ANIMATION_PRO</urn:internalName>
      </ae:project>
      <ae:title>Test Item for TItem</ae:title>
      <ae:description>This is the item description.</ae:description>
      <ae:createdBy xsi:type="ae:UserIdentifier">
        <ae:displayName>Administrator</ae:displayName>
        <ae:id>8</ae:id>
        <ae:uuid>9f9146a3-a273-4411-8000-8396688b7554</ae:uuid>
        <ae:loginId>admin</ae:loginId>
      </ae:createdBy>
      <ae:createDate>2010-09-14T22:39:41Z</ae:createDate>
      <ae:modifiedBy xsi:type="ae:UserIdentifier">
        <ae:displayName/>
        <ae:id>0</ae:id>
        <ae:uuid/>
        <ae:loginId/>
      </ae:modifiedBy>
      <ae:modifiedDate>2010-09-14T22:39:41Z</ae:modifiedDate>
      <ae:activeInactive>false</ae:activeInactive>
      <ae:state xsi:type="ae:StateIdentifier">
        <ae:displayName/>
        <ae:id>0</ae:id>
        <ae:uuid/>
        <ae:internalName></ae:internalName>
        <ae:isClosed>false</ae:isClosed>
      </ae:state>
      <ae:owner xsi:type="ae:UserIdentifier">
        <ae:displayName/>
        <ae:id>0</ae:id>
        <ae:uuid/>
        <ae:loginId/>
```

```
</ae:owner>
<ae:url>http://cs1372:80/tmtrack/tmtrack.dll?IssuePage&
→RecordId=196&Template=view&TableId=1000</ae:url>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Steps to Reproduce</ae:displayName>
    <ae:id>56</ae:id>
    <ae:uuid>9a9545f3-984a-4f1c-92eb-481ebbaab733</ae:uuid>
    <ae:dbName>STEPS_TO_REPRODUCE_</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue/>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>QA APP BUG ID</ae:displayName>
    <ae:id>57</ae:id>
    <ae:uuid>f44ff842-2973-486e-8298-4a1332111998</ae:uuid>
    <ae:dbName>QA_APP_BUG_ID</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue/>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Actual Time to Fix</ae:displayName>
    <ae:id>59</ae:id>
    <ae:uuid>838fbaff-e74d-4d47-b415-85b502ea4676</ae:uuid>
    <ae:dbName>ACTUAL_TIME_TO_FIX</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>0.00</ae:displayValue>
    <ae:internalValue>0.00</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Time Remaining</ae:displayName>
    <ae:id>60</ae:id>
    <ae:uuid>e3326ea7-a02e-4651-a24f-805b2980fbc2</ae:uuid>
    <ae:dbName>TIME_REMAINING</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>0.00</ae:displayValue>
    <ae:internalValue>0.00</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
```

```
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Est Time to Fix</ae:displayName>
    <ae:id>61</ae:id>
    <ae:uuid>7077c520-cf68-45fc-97aa-3721687ec7cf</ae:uuid>
    <ae:dbName>EST_TIME_TO_FIX</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>0.00</ae:displayValue>
    <ae:internalValue>0.00</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Est Date to Fix</ae:displayName>
    <ae:id>62</ae:id>
    <ae:uuid>1a47ca48-5bfd-47e5-b62f-92081484de0a</ae:uuid>
    <ae:dbName>EST_DATE_TO_FIX</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue/>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Tester</ae:displayName>
    <ae:id>63</ae:id>
    <ae:uuid>34b5810f-c1ee-49e9-b3c2-15949e13e54b</ae:uuid>
    <ae:dbName>TESTER</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue>0</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Resolution</ae:displayName>
    <ae:id>64</ae:id>
    <ae:uuid>cee5ba03-235b-484a-bd28-b425a73fa849</ae:uuid>
    <ae:dbName>RESOLUTION</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue>0</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Status Log</ae:displayName>
```

```
        <ae:id>65</ae:id>
        <ae:uuid>c96df948-ce4a-4851-9c4d-5ada1f20ed0d</ae:uuid>
        <ae:dbName>STATUS_LOG</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue/>
        <ae:internalValue/>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>Developer</ae:displayName>
        <ae:id>66</ae:id>
        <ae:uuid>21aead0a-8127-4685-b4f1-4b79cd74504b</ae:uuid>
        <ae:dbName>DEVELOPER</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue/>
        <ae:internalValue>0</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>Team Lead</ae:displayName>
        <ae:id>67</ae:id>
        <ae:uuid>0a460f3e-fe35-4078-a358-9961e41bebe5</ae:uuid>
        <ae:dbName>TEAM_LEAD</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>joe</ae:displayValue>
        <ae:internalValue>2</ae:internalValue>
        <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>Peer Reviewer</ae:displayName>
        <ae:id>68</ae:id>
        <ae:uuid>56f5fa31-be98-4100-a78d-c0bd45115209</ae:uuid>
        <ae:dbName>PEER_REVIEWER</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue/>
        <ae:internalValue>0</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>Severity</ae:displayName>
        <ae:id>69</ae:id>
        <ae:uuid>f4eff572-2e29-4d7f-8478-8e9e16865c2c</ae:uuid>
        <ae:dbName>SEVERITY</ae:dbName>
```

```

    </ae:id>
    <ae:value>
      <ae:displayValue/>
      <ae:internalValue>0</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:extendedField>
  <ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
      <ae:displayName>Reproducible</ae:displayName>
      <ae:id>70</ae:id>
      <ae:uuid>6b21b7e8-f496-43fd-a04d-4a46f714822e</ae:uuid>
      <ae:dbName>REPRODUCIBLE_</ae:dbName>
    </ae:id>
    <ae:value>
      <ae:displayValue>No</ae:displayValue>
      <ae:internalValue>0</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:extendedField>
  <ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
      <ae:displayName>Found in Version</ae:displayName>
      <ae:id>71</ae:id>
      <ae:uuid>08f99c88-6163-457e-b985-f2a70f935cc3</ae:uuid>
      <ae:dbName>FOUND_IN_VERSION</ae:dbName>
    </ae:id>
    <ae:value>
      <ae:displayValue/>
      <ae:internalValue/>
      <ae:uuid/>
    </ae:value>
  </ae:extendedField>
  <ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
      <ae:displayName>Regression</ae:displayName>
      <ae:id>72</ae:id>
      <ae:uuid>d7790d89-c772-4b5c-a6e9-5e9ebb27ff5a</ae:uuid>
      <ae:dbName>REGRESSION_</ae:dbName>
    </ae:id>
    <ae:value>
      <ae:displayValue>(Not Checked)</ae:displayValue>
      <ae:internalValue>0</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:extendedField>
  <ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
      <ae:displayName>Priority</ae:displayName>
      <ae:id>73</ae:id>
      <ae:uuid>3141e866-7b20-4916-af87-9de705cc4b43</ae:uuid>
      <ae:dbName>PRIORITY</ae:dbName>
    </ae:id>
    <ae:value>
      <ae:displayValue/>

```

```
        <ae:internalValue>0</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>How Found</ae:displayName>
        <ae:id>74</ae:id>
        <ae:uuid>b999082f-ef27-47c9-890f-b4d80a3c4c23</ae:uuid>
        <ae:dbName>HOW_FOUND</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue/>
        <ae:internalValue>0</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>Functional Area</ae:displayName>
        <ae:id>75</ae:id>
        <ae:uuid>165fe23f-ffea-4958-979c-f7d233b7df84</ae:uuid>
        <ae:dbName>FUNCTIONAL_AREA</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue/>
        <ae:internalValue>0</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>QA Reject Count</ae:displayName>
        <ae:id>76</ae:id>
        <ae:uuid>d2cb9f78-f29e-43c7-9fd2-b43c565fd5cc</ae:uuid>
        <ae:dbName>QA_REJECT_COUNT</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>0</ae:displayValue>
        <ae:internalValue>0</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>Secondary Owner</ae:displayName>
        <ae:id>78</ae:id>
        <ae:uuid>bcc74000-2e86-4813-84f2-c46c7229fef4</ae:uuid>
        <ae:dbName>SECONDARYOWNER</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>-2</ae:displayValue>
        <ae:internalValue>-2</ae:internalValue>
        <ae:uuid>0</ae:uuid>
    </ae:value>
```

```

</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Development Team</ae:displayName>
    <ae:id>79</ae:id>
    <ae:uuid>88a2d035-80ce-472c-8d32-90e7abb85633</ae:uuid>
    <ae:dbName>DEVELOPMENT_TEAM</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue/>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Replicated Issue URL</ae:displayName>
    <ae:id>156</ae:id>
    <ae:uuid>54acff35-aeb3-4245-8e8b-357d77b10b7c</ae:uuid>
    <ae:dbName>REPLICATED_ISSUE_URL</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue/>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Percentage Complete</ae:displayName>
    <ae:id>163</ae:id>
    <ae:uuid>f4f8cc08-5c1d-478c-9ac1-c9b5cb0692e8</ae:uuid>
    <ae:dbName>PERCENTAGE_COMPLETE</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>0</ae:displayValue>
    <ae:internalValue>0</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Close Date</ae:displayName>
    <ae:id>164</ae:id>
    <ae:uuid>68a285b6-92f7-46da-8c9c-7a376a5e83b2</ae:uuid>
    <ae:dbName>CLOSEDATE</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>2010-09-14T22:39:41+00:00</ae:displayValue>
    <ae:internalValue>2010-09-14T22:39:41+00:00</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">

```

```
    <ae:displayName>Last State Change Date</ae:displayName>
    <ae:id>165</ae:id>
    <ae:uuid>f2ef8a18-61f8-4272-8353-2f2796223e33</ae:uuid>
    <ae:dbName>LASTSTATECHANGEDATE</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>2010-09-14T22:39:41+00:00</ae:displayValue>
    <ae:internalValue>2010-09-14T22:39:41+00:00</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>P4Status</ae:displayName>
    <ae:id>166</ae:id>
    <ae:uuid>e0e50784-5cb8-424f-9e2b-3406ac1fd9b1</ae:uuid>
    <ae:dbName>P4STATUS</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>suspended</ae:displayValue>
    <ae:internalValue>2</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>Case URL</ae:displayName>
    <ae:id>167</ae:id>
    <ae:uuid>d8cf42f2-8a50-42f4-8798-f8b1a8391852</ae:uuid>
    <ae:dbName>CASE_URL</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue/>
    <ae:internalValue/>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>BINARY TRINARY</ae:displayName>
    <ae:id>188</ae:id>
    <ae:uuid>bdcecc1a-d7b8-4571-819c-2fb5df8f5b5e</ae:uuid>
    <ae:dbName>BINARY_TRINARY</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>True</ae:displayValue>
    <ae:internalValue>0</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>DATE AND TIME</ae:displayName>
    <ae:id>189</ae:id>
    <ae:uuid>b0edf3b4-771b-488d-896d-cafe5a349de7</ae:uuid>
```

```

        <ae:dbName>DATE_AND_TIME</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>2010-05-01T06:00:00+00:00</ae:displayValue>
        <ae:internalValue>2010-05-01T06:00:00+00:00</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>DATE_ONLY</ae:displayName>
        <ae:id>190</ae:id>
        <ae:uuid>b47a0270-95de-49db-b83f-0a1506c9bd63</ae:uuid>
        <ae:dbName>DATE_ONLY</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>2008-05-01</ae:displayValue>
        <ae:internalValue>2008-05-01T00:00:00+00:00</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>TIME_OF_DAY</ae:displayName>
        <ae:id>191</ae:id>
        <ae:uuid>2e7a47e0-546c-4842-af1d-81b0438ef398</ae:uuid>
        <ae:dbName>TIME_OF_DAY</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>17:36:39</ae:displayValue>
        <ae:internalValue>63399</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>ELAPSED_TIME</ae:displayName>
        <ae:id>192</ae:id>
        <ae:uuid>9060a8db-ae8d-4dbe-b790-c33a3f0724fd</ae:uuid>
        <ae:dbName>ELAPSED_TIME</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>7 17:36:39</ae:displayValue>
        <ae:internalValue>668199</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>FOLDER</ae:displayName>
        <ae:id>193</ae:id>
        <ae:uuid>62830604-fa8b-48af-bb81-eba5c992d2f1</ae:uuid>
        <ae:dbName>FOLDER</ae:dbName>
    </ae:id>
    <ae:value>

```

```
        <ae:displayValue>InBox</ae:displayValue>
        <ae:internalValue>45</ae:internalValue>
        <ae:uuid>feb880b1-1156-4b3f-88d4-de41dfefaf8a</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>MULTI_GROUP</ae:displayName>
        <ae:id>194</ae:id>
        <ae:uuid>6d8bdef8-1136-4747-b88c-23c3e428e841</ae:uuid>
        <ae:dbName>MULTI_GROUP</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>IDM Team</ae:displayValue>
        <ae:internalValue>2</ae:internalValue>
        <ae:uuid>634aed4a-bc98-49d3-86f0-6095c2f7b9b6</ae:uuid>
    </ae:value>
    <ae:value>
        <ae:displayValue>IDM Administrator</ae:displayValue>
        <ae:internalValue>4</ae:internalValue>
        <ae:uuid>9156f029-6421-4f15-b84f-0ba67d593b3b</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>MULTI_RELATIONAL</ae:displayName>
        <ae:id>195</ae:id>
        <ae:uuid>d5df0429-0bab-47ab-ba0b-8d5befce0bf0</ae:uuid>
        <ae:dbName>MULTI_RELATIONAL</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>App1 - test123</ae:displayValue>
        <ae:internalValue>1004:1</ae:internalValue>
        <ae:uuid>6c3741ff-5272-4659-9f0e-f7d8d6b0e616</ae:uuid>
    </ae:value>
    <ae:value>
        <ae:displayValue>App2 - field456</ae:displayValue>
        <ae:internalValue>1004:2</ae:internalValue>
        <ae:uuid>bcfa0ff7-0b0a-4bda-835c-19f7b3a3f9c8</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>MULTI_SELECTION</ae:displayName>
        <ae:id>196</ae:id>
        <ae:uuid>aa9eb88c-aa9a-477a-b3ea-92fd7bc4a257</ae:uuid>
        <ae:dbName>MULTI_SELECTION</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>Blue</ae:displayValue>
        <ae:internalValue>68</ae:internalValue>
        <ae:uuid>2b51dc08-f59c-4e20-a5a3-98527ce3172b</ae:uuid>
    </ae:value>
    <ae:value>
        <ae:displayValue>Green</ae:displayValue>
```

```

        <ae:internalValue>69</ae:internalValue>
        <ae:uuid>7f406b54-c629-42ec-be0a-52de6250f9da</ae:uuid>
    </ae:value>
    <ae:value>
        <ae:displayValue>Red</ae:displayValue>
        <ae:internalValue>70</ae:internalValue>
        <ae:uuid>823c84f1-7fab-436b-ad1f-8b344676d62e</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>MULTI_USER</ae:displayName>
        <ae:id>197</ae:id>
        <ae:uuid>67fba7ee-f62b-4603-8066-5d76f92c408a</ae:uuid>
        <ae:dbName>MULTI_USER</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>admin</ae:displayValue>
        <ae:internalValue>8</ae:internalValue>
        <ae:uuid>9f9146a3-a273-4411-8000-8396688b7554</ae:uuid>
    </ae:value>
    <ae:value>
        <ae:displayValue>bill</ae:displayValue>
        <ae:internalValue>27</ae:internalValue>
        <ae:uuid>225b4498-ce4b-4332-8775-6ccca90bebb4</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>NUMERIC</ae:displayName>
        <ae:id>198</ae:id>
        <ae:uuid>e98538af-d1f1-4619-b4b4-90476529377c</ae:uuid>
        <ae:dbName>NUMERIC</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>55</ae:displayValue>
        <ae:internalValue>55</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">
        <ae:displayName>SINGLE_RELATIONAL</ae:displayName>
        <ae:id>199</ae:id>
        <ae:uuid>985c6a50-a523-4c81-975b-0336fed82b2a</ae:uuid>
        <ae:dbName>SINGLE_RELATIONAL</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>App1 - test123</ae:displayValue>
        <ae:internalValue>1004:1</ae:internalValue>
        <ae:uuid>6c3741ff-5272-4659-9f0e-f7d8d6b0e616</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:extendedField>
    <ae:id xsi:type="ae:FieldIdentifier">

```

```
    <ae:displayName>SINGLE SELECTION</ae:displayName>
    <ae:id>200</ae:id>
    <ae:uuid>6467afee-cd2d-431c-9d98-9059ab293bf7</ae:uuid>
    <ae:dbName>SINGLE_SELECTION</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>Yellow</ae:displayValue>
    <ae:internalValue>77</ae:internalValue>
    <ae:uuid>2d16b39d-1be9-44a0-805c-1f9074c8ac35</ae:uuid>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>NUMERIC 2 FOR SUM</ae:displayName>
    <ae:id>201</ae:id>
    <ae:uuid>d4a2d02d-f52a-40a8-82de-edc8f26c9c87</ae:uuid>
    <ae:dbName>NUMERIC_2_FOR_SUM</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>10</ae:displayValue>
    <ae:internalValue>10</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>SUMMATION</ae:displayName>
    <ae:id>202</ae:id>
    <ae:uuid>2eb93809-e071-42eb-8ac4-af6cdf06fd43</ae:uuid>
    <ae:dbName>SUMMATION</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>0</ae:displayValue>
    <ae:internalValue>0</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>TEXT</ae:displayName>
    <ae:id>203</ae:id>
    <ae:uuid>84272380-923e-40e2-91e0-b505fe3081b3</ae:uuid>
    <ae:dbName>TEXT</ae:dbName>
  </ae:id>
  <ae:value>
    <ae:displayValue>This is some text.</ae:displayValue>
    <ae:internalValue>This is some text.</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:extendedField>
<ae:extendedField>
  <ae:id xsi:type="ae:FieldIdentifier">
    <ae:displayName>USER</ae:displayName>
    <ae:id>204</ae:id>
    <ae:uuid>61f40abc-8285-4485-96d6-ead4701b74a9</ae:uuid>
```

```

        <ae:dbName>USER</ae:dbName>
    </ae:id>
    <ae:value>
        <ae:displayValue>carmen</ae:displayValue>
        <ae:internalValue>10</ae:internalValue>
        <ae:uuid>c4a1c377-569c-469a-913b-9e1e94e88f26</ae:uuid>
    </ae:value>
</ae:extendedField>
<ae:note>
    <ae:id>103</ae:id>
    <ae:title>Note Title</ae:title>
    <ae:note>this is a note</ae:note>
    <ae:author xsi:type="ae:UserIdentifier">
        <ae:displayName>Administrator</ae:displayName>
        <ae:id>8</ae:id>
        <ae:uuid>9f9146a3-a273-4411-8000-8396688b7554</ae:uuid>
        <ae:loginId>admin</ae:loginId>
    </ae:author>
    <ae:modificationDateTime>2010-09-14T22:39:41Z</ae:modificationDateTime>
    <ae:accessType>ATTACHACCESS-RESTRICTED</ae:accessType>
</ae:note>
    <ae:subtasks/>
</ae:item>
</ae:return>
</ae:CreatePrimaryItemsResponse>

```

URLAttachment

Description

The URLAttachment type holds information about a URL attached to a primary or auxiliary item. The URLAttachment type parameters are listed below.

Parameters

Name	Type	Description
id	integer	This is the internal TS_ID of the URL attachment from the TS_ATTACHMENTS table.
name	string	The name you give the URL attachment in SBM.
url	string	The actual URL itself.
showAsImage	boolean	This flag indicates whether or not graphic images in a URL are shown on forms.
modificationDateTime	dateTime	The date and time when the URL attachment was last modified. See Supported Date/Time Formats [page 386] for more information.

Name	Type	Description
accessType	Attachment-Access-Type [page 96]	Shows the access type for the URL attachment. The value is either DEFAULT, RESTRICTED, or UNRESTRICTED.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

You can add a URL to a primary or auxiliary item using the URLAttachment argument. URLs can be links to an external Web site or to a page within SBM.



Note: If you set `<urn:showAsImage>` to true, the image appears instead of a hyperlink when the item is viewed. If you enter a URL to a graphic file such as `http://www.acme.com/image.gif`, the graphic appears. To show a URL graphically, an image file must be part of the URL. If you enter `www.acme.com` and select to show the URL as an image, an image does not appear because there is not an image file specified in the URL. Typically, this feature works for GIF and JPEG files, but can work in some browsers for PNG and BMP files as well. The file type that you can use for this feature depends on the file types your browser supports.



Tip: Internet Explorer is the only browser that supports URLs to files. Links to files do not work for users accessing the URLs to files from other browser types.

XML

The following XML snippet shows the URLAttachment type in the `<urn:urlAttachment>` parameter of TItem.

```
<urn:urlAttachment>
  <urn:id>38</urn:id>
  <urn:name>test url</urn:name>
  <urn:url>http://www.acme.com/image.gif</urn:url>
  <urn:showAsImage>true</urn:showAsImage>
  <urn:modificationDateTime>2007-06-20T15:35:38-07:00
  →</urn:modificationDateTime>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
</urn:urlAttachment>
```

UserIdentifier

Description

The UserIdentifier type holds the identification information for a user. The UserIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a user.
loginId	string	The unique login ID for the user.

Usage

The UserIdentifier is the identifier that can be used in Web service methods to uniquely identify a user. The UserIdentifier contains the generic information about a user (including the display name, ID, and UUID) in addition to the login ID for the user.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows UserIdentifier as seen in a typical call.

```
<urn:user>
  <urn:displayName>Joe Manager</urn:displayName>
  <urn:id>2</urn:id>
  <urn:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</urn:uuid>
  <urn:loginId>joe</urn:loginId>
</urn:user>
```

UserIdentifierEx

Description

The UserIdentifierEx type holds the identification information for one or more users. The UserIdentifierEx type parameters are listed below.

Parameters

Name	Type	Description
id	UserIdentifier [page 157]	Holds the complete identification information for a user.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The `UserIdentifierEx` type is used to uniquely identify one or more users. The `UserIdentifierEx` type contains complete identification information about one or more users (including display names, IDs, and UUIDs). `UserIdentifierEx` is used to specify multiple users in a single call or response.

XML

The following XML shows `UserIdentifierEx` as seen in a typical call.

```
<urn:user>
  <urn:displayName>Joe Manager</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:user>
<urn:user>
  <urn:displayName>Chad Support</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:user>
```

The following XML shows `UserIdentifierEx` as seen in the `GetGroupMembers` response.

```
<ae:member>
  <ae:id xsi:type="ae:UserIdentifier">
    <ae:displayName>Joe Manager</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</ae:uuid>
  </ae:id>
</ae:member>
<ae:member>
  <ae:id xsi:type="ae:UserIdentifier">
    <ae:displayName>Carmen Chief Officer</ae:displayName>
    <ae:id>10</ae:id>
    <ae:uuid>c4a1c377-569c-469a-913b-9e1e94e88f26</ae:uuid>
  </ae:id>
</ae:member>
```

WorkflowIdentifier

Description

The `WorkflowIdentifier` type holds the identification information for a workflow. The `WorkflowIdentifier` type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the <code>displayName</code> , <code>id</code> , and <code>uuid</code> for a workflow.

Usage

The WorkflowIdentifier is the identifier that can be used in Web service methods to uniquely identify a workflow. The WorkflowIdentifier contains the generic information about a workflow (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows WorkflowIdentifier as seen in a typical call.

```
<urn:workflow>
  <urn:displayName>IDM</urn:displayName>
  <urn:id>2</urn:id>
  <urn:uuid>5296c4b1-4bab-48a9-83b3-1f633894ef33</urn:uuid>
</urn:workflow>
```

Arguments

This section provides detailed descriptions of SBM Application Web service arguments. The arguments are the request parameters that can be used by SBM Application Web service operations. The arguments listed here contain one or more parameters, which make up the data that is sent to the Web service. The parameters listed in each argument are either simple or complex types themselves. If the parameter is a complex type, click the link in the **Type** column for more detail.

The following table lists all supported arguments in alphabetical order, followed by a brief description of each type. Select an argument to view detailed information including:

- **Description** – A brief description of the argument.
- **Parameters** – A table that describes the simple and complex types for each argument. For each complex type, click the type name for a detailed description.
- **Usage** – Any notes, additional details, and considerations are addressed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Arguments

Argument	Description
Auth [page 161]	Supplies credentials and optionally, a host name for licensing.
ExtendedData [page 162]	Placeholder argument for future argument elements.

Argument	Description
ExtraValue [page 163]	Holds a name value pairing for future elements.
GetTransitionOptions [page 163]	Indicates the type of transitions to return.
MultipleOption [page 164]	Specifies whether a service should stop on failure and send an error message or continue processing.
MultipleOptions [page 165]	Holds the Options type and an enumeration to determine if a service should stop on failure and send an error message or continue processing.
MultipleResponseItemOptions [page 166]	Holds the Options type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing. Also enables you to limit the data that is returned in a response.
NameValue [page 168]	Holds a field and indicates how the field value is set.
NoteAttachmentContents [page 170]	Holds information, title, and content of a note.
Options [page 171]	Holds the ExtraValue type, which contains name value pairing for future arguments on certain calls.
PrivilegeInfo [page 171]	Holds the name and assignment information for a privilege.
ReportData [page 172]	Holds the identification information for a report that is used by the RunReportXml call.
ReportsFilter [page 173]	Allows you to filter reports.
ResponseItemOptions [page 175]	Holds the Options type and enables you to limit the data that is returned in a response.
RoleInfo [page 178]	Holds the role name and assignment information for users and groups.
SectionsOption [page 179]	Determines the section of an item to return.

Argument	Description
Set-Value-By [page 181]	Indicates how the value in the NameValue type should be set on an update or create.
Set-Value-Method [page 182]	Indicates the operation that should be performed with the values in the NameValue type.
UserResponseOptions [page 185]	Holds the UserSingleResponseOptions type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing.
UserSingleResponseOptions [page 187]	Holds the Options type and enables you to limit the data that is returned in a response.

Auth

Description

The Auth type supplies credentials and optionally, a host name for licensing. The Auth type parameters are listed below.

Parameters

Name	Type	Description
userId	string	The SBM user Login ID. If you are only specifying the host name, then <code>userId</code> is optional.
password	string	The password for the user. If you are only specifying the host name, then <code>password</code> is optional.
hostname	string	The host name of the client.
loginAsUserId	string	User ID for the SBM login you wish to impersonate. If you are only specifying the host name, then <code>loginAsUserId</code> is optional.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The Auth type allows credentials to be provided if not using WS-SECURITY or HTTP BASIC to pass the credentials. The hostname element is only needed in case you want to override the client's IP address for licensing purposes, forcing License Manager to use a

particular client host. If it is not provided, the code gets the client hostname from the socket.



Note: The loginAsUserId parameter requires that the calling user is either a Global Managed Administrator or a Managed Administrator with Admin privileges to one of the groups which the user to be impersonated belongs.

XML

The following XML shows Auth as seen in a typical call.

```
<urn:auth>
  <urn:userId>admin</urn:userId>
  <urn:password>password</urn:password>
  <urn:hostname>serverName</urn:hostname>
  <urn:loginAsUserId></urn:loginAsUserId>
  <urn:extendedData></urn:extendedData>
</urn:auth>
```

ExtendedData

Description

The ExtendedData type is a placeholder for future argument or response elements. The ExtendedData type parameters are listed below.

Parameters

Name	Type	Description
data	ExtraValue [page 163]	Holds the name value pair for an additional argument or response element.

Usage

The ExtendedData type is simply a placeholder for future arguments that might be added to a given call. Responses have a similar placeholder for future response elements.

XML

The following XML shows ExtendedData as seen within the auth argument of a typical call.

```
<urn:auth>
  <urn:userId>admin</urn:userId>
  <urn:password>password</urn:password>
  <urn:hostname>serverName</urn:hostname>
  <urn:loginAsUserId></urn:loginAsUserId>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
</urn:auth>
```

ExtraValue

Description

ExtraValue holds a name value pairing for future elements.

Parameters

Name	Type	Description
name	string	Holds the name of a future element.
value	string	Holds the value of a future element.

Usage

None.

XML

The following XML shows ExtraValue in the `<urn:extraOption>` element in a typical call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
</urn:options>
```

GetTransitionOptions

Description

GetTransitionOptions indicates the type of transitions that are returned for an item.

Parameters

Name	Type	Description
TRANSITIONS-ALL	string	Returns all transition types. This is the default value. If no value is specified, ALL is the assumed value.
TRANSITIONS-QUICK	string	Returns only quick transitions.

Usage

Use the `transitionOptions` argument to specify which types of transitions are returned for a given item.

XML

The following XML shows GetTransitionOptions in the `<urn:transitionOptions>` argument of the `GetAvailableTransitions` call.

```

<urn:GetAvailableTransitions>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:item>
    <urn:displayName></urn:displayName>
    <urn:id>25</urn:id>
    <urn:uuid></urn:uuid>
    <urn:tableId>1000</urn:tableId>
    <urn:tableIdItemId></urn:tableIdItemId>
    <urn:issueId></urn:issueId>
  </urn:item>
  <urn:transitionOptions>TRANSITIONS-ALL</urn:transitionOptions>
  <urn:attributeName></urn:attributeName>
</urn:GetAvailableTransitions>

```

MultipleOption

Description

The MultipleOption enumeration enables you to specify whether a Web service should stop on failure and send an error message or continue processing.

Parameters

Name	Type	Description
CONTINUE-ON-FAILURE	string	If a failure is encountered, continue processing the rest of the items in the call.
STOP-ON-FAILURE	string	If a failure is encountered, stop processing items and return an error.

Usage

The MultipleOption element enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all items have been processed. See [TTItemHolder \[page 234\]](#) for an example of a GetItems call that returns an error, but continues to process the rest of the items.

XML

The following XML shows MultipleOption in the `<urn:multiOption>` element of a typical call.

```

<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>

```

```

        <urn:value></urn:value>
    </urn:extraOption>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
    <urn:sections>SECTIONS-ALL</urn:sections>
    <urn:specifiedSections></urn:specifiedSections>
    </urn:limitedField>
</urn:options>

```

MultipleOptions

Description

MultipleOptions holds the Options type and enables you to specify whether a Web service should continue if an error is encountered, or stop and throw an error.

Parameters

Name	Type	Description
options	Extension. See Options [page 171] .	Options extension base. Holds name value pairing for future arguments on certain calls.
multiOption	MultipleOption [page 164]	Enumeration element that holds the option to continue or stop processing of items.

Usage

MultipleOptions holds the Options type and the MultipleOption type. You use the multiOption parameter to control service handling as follows:

- multiOption** – Use the multiOption element to specify whether the service should continue if an error is encountered, or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. If you specify CONTINUE-ON-FAILURE, then failures do not result in a return before all items have been processed. For more information, see [MultipleOption \[page 164\]](#).

XML

The following XML shows MultipleOptions in the <urn:options> element in a typical call.

```

<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>

```

MultipleResponseItemOptions

Description

MultipleResponseItemOptions holds the ResponseItemOptions type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing.

Parameters

Name	Type	Description
ResponseItemOptions	Extension. See ResponseItemOptions [page 175] .	ResponseItemOptions extension base. Holds a name value pairing for future elements and enables you to limit the data returned in the response.
multiOption	MultipleOption [page 164]	Enumeration element that holds the option to continue processing or stop when an error is encountered.

Usage

The MultipleResponseItemOptions contains the same functionality as ResponseItemOptions, but it also enables you to specify an enumeration value that determines if the service should continue processing or stop when an error is encountered.

You use the following parameters in ResponseItemOptions and the multiOption parameter to control service handling and the amount of data that is returned in the response:

- **sections** and **specifiedSections** – Use these elements to specify which parts of an item should be returned in order to limit the data that is returned for a given item. The sections that are not specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want. For more information, see [SectionsOption \[page 179\]](#). In the sections parameter, specify one of the following enumeration options:
 - **SECTIONS-ALL** – Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value.
 - **SECTIONS-NONE** – No sections are returned (only the ItemIdentifier is returned). Note that the ItemIdentifier is always returned, regardless of the value or values specified in the sections parameter.
 - **SECTIONS-SPECIFIED** – Returns sections that you specify.

You can use a comma-separated list in specifiedSections to return only the sections of an item you want. For example:

```
<urn:specifiedSections>SECTION:FIXED,SECTION:EXTENDED</urn:specifiedSections>
```

This ensures that only the fixed and extended sections of an item are returned. Here are some of the possible sections you can specify:

- **SECTION:FIXED** – All parameters in TTIItem (from `<urn:itemType>` to `<urn:url>`) prior to the `extendedField` parameter are returned.
- **SECTION:EXTENDED** – Returns all of the `extendedFields` in TTIItem.
- **SECTION:ATTACHMENTS** – Returns all of the attachment sections of TTIItem. You can return the next four sections simply by specifying:

```
<urn:specifiedSections>SECTION:ATTACHMENTS</urn:specifiedSections>
```

- **SECTION:NOTES** – Returns all note sections of TTIItem.
- **SECTION:ITEMLINKS** – Returns all `itemLink` sections of TTIItem.
- **SECTION:URLATTACHMENTS** – Returns all `urlAttachment` sections of TTIItem.
- **SECTION:FILEATTACHMENTS** – Returns all `fileAttachment` sections of TTIItem.



Note: If you specify `SECTION:NONE` after other sections, those preceding sections will not be returned. For example, `SECTION:FIXED,SECTION:NONE,SECTION:EXTENDED` will only return the `extendedField` sections.

- **limitedField** – Use the `limitedField` element to use specific fields to limit the item data that is returned. For example, you can specify one or more fields to limit a service response to return only the fields that you want to return. In the event that `limitedField` contradicts the `sections` value, the `sections` specification takes precedence. The following XML shows how to limit return results using the `limitedField` option.

```
<urn:limitedField>
  <urn:displayName>Severity</urn:displayName>
  <urn:id>69</urn:id>
  <urn:uuid>f4eff572-2e29-4d7f-8478-8e9e16865c2c</urn:uuid>
  <urn:dbName>SEVERITY</urn:dbName>
</urn:limitedField>
```

- **multiOption** – Use the `multiOption` element to specify whether the service should continue if an error is encountered, or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. If you specify `CONTINUE-ON-FAILURE`, then failures do not result in a return before all items have been processed. For more information, see [MultipleOption \[page 164\]](#).

XML

The following XML shows `MultipleResponseItemOptions` in the `<urn:options>` element of a typical call.

```
<urn:options>
  <urn:extraOption>
```

```

    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:EXTENDED</urn:specifiedSections>
  </urn:limitedField>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>

```

NameValue

Description

The NameValue type holds a field name with either a single value or a list of values and determines how the field value is set. The NameValue parameters are listed below.

Parameters

Name	Type	Description
id	FieldIdentifier [page 99]	The field identifier.
setValueBy	Set-Value-By [page 181]	Determines how to set the value (which value takes precedence).
setValueMethod	Set-Value-Method [page 182]	Use setValueMethod to append, remove, or replace a value.
value	FieldValue [page 100]	Holds information about a field value.

Usage

When specifying a value or values, you can use the display, internal, or UUID value. In addition, you can use the setValueBy element to specify which type of value it is, though it is not required. The setValueBy element is mainly used if you are passing in an empty value. Otherwise, SBM will determine which type of value is set by checking for a non-empty value.

To set an empty value, you must use the SET-VALUE-BY parameter that corresponds to the empty `<value>` parameter. For example, to set an empty value for a field using the internalValue parameter, you could specify:

```

<urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
<urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
<urn:value>
  <urn:internalValue></urn:internalValue>

```

Alternatively, to set an empty value for a field using the displayValue parameter, you could specify:

```
<urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
<urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
<urn:value>
  <urn:displayValue></urn:displayValue>
```

- To set an empty value for a single or Multi-Relational field, you must use INTERNAL-VALUE in SetValueBy and empty tags in the internalValue parameter.
- To set an empty value for a Text field, use INTERNAL-VALUE in SetValueBy and REMOVE-VALUES in the SetValueMethod parameter.

XML

The following XML shows the NameValue type as seen in a typical call.

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>Severity</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SEVERITY</urn:dbName>
  </urn:id>
  <urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Critical</urn:displayValue>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>
```

The following XML shows the NameValue type with multiple values as seen in a typical call.

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>MULTI USER</urn:displayName>
    <urn:id>178</urn:id>
    <urn:uuid>f62c6b63-2531-441a-9fff-9cd471bc61ca</urn:uuid>
    <urn:dbName>MULT_USER</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>APPEND-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>admin</urn:displayValue>
    <urn:internalValue>1</urn:internalValue>
    <urn:uuid>d2d60592-656e-4103-a20d-f12da9305fe4</urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>bill</urn:displayValue>
    <urn:internalValue>10</urn:internalValue>
    <urn:uuid>7130c9c3-abb6-41f5-bd7a-30c40f47b824</urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>carmen</urn:displayValue>
```

```

        <urn:internalValue>11</urn:internalValue>
        <urn:uuid>9d71b19e-9b72-4731-bec3-3eba938da0de</urn:uuid>
    </urn:value>
</urn:extendedField>

```

Using the example above, if this payload was sent with TransitionItems, the call would append admin, bill, and carmen to the current selections that exist in the "MULTI USER" field.

The following XML shows how to clear a Text field value.

```

<urn:extendedField>
  <urn:id>
    <urn:displayName>text</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName></urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>REMOVE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue></urn:displayValue>
    <urn:internalName></urn:internalName>
    <urn:internalValue></urn:internalValue>
    <urn:uuid></urn:uuid>
  </urn:value>
</urn:extendedField>

```

NoteAttachmentContents

Description

The NoteAttachmentContents type holds the actual contents of a note. The NoteAttachmentContents type parameters are listed below.

Parameters

Name	Type	Description
time	integer	The time at which the note was created.
title	string	The title of the note.
body	string	Holds the contents of the body of the note.
accessType	Attachment-Access-Type [page 96]	Shows the access type for the note. The value is either DEFAULT, RESTRICTED, or UNRESTRICTED.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

NoteAttachmentContents is used to describe a note that is attached to an item. You use NoteAttachmentsContents in the CreateNoteAttachment call to add a note to an existing item. For more information, see [CreateNoteAttachment \[page 32\]](#).

XML

The following XML snippet shows NoteAttachmentContents in the `<urn:noteContents>` argument of a CreateNoteAttachment call.

```
<urn:noteContents>
  <urn:time></urn:time>
  <urn:title>Note Title</urn:title>
  <urn:body>This is a note.</urn:body>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
</urn:noteContents>
```

Options

Description

Options holds the ExtraValue type, which contains a name value pairing for future arguments on certain calls.

Parameters

Name	Type	Description
extraOption	ExtraValue [page 163]	Holds a name value pairing for future elements.

Usage

None.

XML

The following XML shows Options as seen in a typical call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
</urn:options>
```

PrivilegeInfo

Description

The PrivilegeInfo type holds the name and assignment information for a privilege. The PrivilegeInfo type parameters are listed below.

Parameters

Name	Type	Description
privilegeId	PrivilegeIdentifier [page 113]	Mandatory privilege identifier. Holds the complete identification information for a privilege.
access	GrantState [page 104]	Mandatory enumeration element that holds privilege assignment information.
objectId	Identifier [page 107]	Object identifier; object type depends on the PrivilegeIdentifier attributes (privilege name or type). Refer to the tables in SetUserPrivileges [page 304] or SetGroupPrivileges [page 299] for the objectId that must accompany each privilege type.
projectId	ProjectIdentifier [page 114]	Optional project identifier. Mandatory for TS_FLDPRIVTYPE_ADMFLD privilege to uniquely identify a field by the field name and project name; however, it is not required if the field is identified by UUID or database ID.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The PrivilegeInfo type contains the privilege name and how the privilege is currently assigned. You use PrivilegeInfo in the [SetUserPrivileges \[page 304\]](#) and [SetGroupPrivileges \[page 299\]](#) calls to assign privileges to particular users or groups.

XML

The following XML shows PrivilegeInfo as seen in the `<urn:privilege>` element in a typical call.

```
<urn:privilege>
  <urn:privilegeId>
    <urn:name>TS_USRPRJPRIV_DELETE</urn:name>
  </urn:privilegeId>
  <urn:access>GRANTED</urn:access>
  <urn:objectId>
    <urn:displayName>IM Project</urn:displayName>
  </urn:objectId>
</urn:privilege>
```

ReportData

Description

The ReportData type holds the identification information for a report that is used by the RunReportXml call. The ReportData type parameters are listed below.

Parameters

Name	Type	Description
id	long	Holds the TS_ID of the report from the TS_REPORTS table.
reportReference	string	Holds the reference name of the report for reports created in SBM Composer.

Usage

The ReportData type is used in the RunReportXml call to uniquely identify a report. The ReportData type contains the TS_ID of the report from the TS_REPORTS table.

XML

The following XML shows ReportData as seen in a typical RunReportXml call.

```
<urn:report>  
  <urn:id>8</urn:id>  
  <urn:reportReference></urn:reportReference>  
</urn:report>
```

ReportsFilter

Description

The ReportsFilter type allows you to filter the reports returned via the GetReports call. The ReportsFilter type parameters are listed below.

Parameters

Name	Type	Description
solution	SolutionIdentifier [page 122]	Holds the identification information for a solution.
project	ProjectIdentifier [page 114]	Holds the identification information for a project.
table	TableIdentifier [page 126]	Holds the identification information for a table.
author	UserIdentifier [page 157]	Holds the identification information for a user.
reportType	ReportType [page 120]	An enumeration that indicates the type of report. The default value is 1 for LISTING.

Name	Type	Description
reportCategory	ReportCategory [page 118]	A broader enumeration that limits the response based on the category of report (built-in reports, application reports, reports you authored). The default value is "ALL."
reportAccessLevel	ReportAccessLevel [page 116]	An enumeration that limits the response based on the report's access level (PRIVATE, GUEST, USER, or MANAGER).
report	ReportIdentifier [page 119]	Holds the identification information for a report.
searchByName	string	Specifies the name of the report as a search parameter.
includeSubProjects	boolean	This flag indicates whether or not to include reports that are based on sub-projects of the project that is specified. The default value is "false."
createdDateFrom	dateTime	Filter reports created after this date.
createdDateTo	dateTime	Filter reports created before this date.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

You can filter the reports returned in [GetReports \[page 63\]](#) using ReportsFilter. For example, you can specify "joe" in the displayName of the author element to only return reports that Joe created. Keep in mind that projects do not exist for auxiliary tables so the ProjectIdentifier should be left empty when searching for reports against auxiliary tables.



Tip: You can easily find the proper solution's uniqueName by looking at the Internal Name of the application in SBM Composer.



Note: You can treat the searchByName as a search parameter and enter only part of the report name. In the example below, "All" is sent in searchByName to filter on reports that include the word "All" in the report title. See the XML in [RunReportResult \[page 217\]](#) for an example of the response.

XML

The following XML snippet shows ReportsFilter as seen in a typical call.

```
<urn:reportsFilter>
  <urn:solution>
    <urn:displayName></urn:displayName>
    <urn:id>1</urn:id>
```

```

        <urn:uuid></urn:uuid>
        <urn:uniqueName>BASE_ISSUE_DEFECT_TRACKING</urn:uniqueName>
        <urn:tabName></urn:tabName>
    </urn:solution>
    <urn:project>
        <urn:displayName></urn:displayName>
        <urn:id>4</urn:id>
        <urn:uuid></urn:uuid>
        <urn:fullyQualifiedName></urn:fullyQualifiedName>
    </urn:project>
    <urn:table>
        <urn:displayName></urn:displayName>
        <urn:id>1000</urn:id>
        <urn:uuid></urn:uuid>
        <urn:dbName></urn:dbName>
    </urn:table>
    <urn:author>
        <urn:displayName>Joe</urn:displayName>
        <urn:id></urn:id>
        <urn:uuid></urn:uuid>
        <urn:loginId></urn:loginId>
    </urn:author>
    <urn:reportType>LISTING</urn:reportType>
    <urn:reportCategory>ALL</urn:reportCategory>
    <urn:reportAccessLevel>USER</urn:reportAccessLevel>
    <urn:report>
        <urn:displayName></urn:displayName>
        <urn:id></urn:id>
        <urn:uuid></urn:uuid>
    </urn:report>
    <urn:searchByName>ALL</urn:searchByName>
    <urn:includeSubProjects>true</urn:includeSubProjects>
    <urn:createdDateFrom>2007-06-20T15:35:38-07:00</urn:createdDateFrom>
    <urn:createdDateTo>2007-07-20T15:35:38-07:00</urn:createdDateTo>
    <urn:extendedData>
        <urn:data>
            <urn:name></urn:name>
            <urn:value></urn:value>
        </urn:data>
    </urn:extendedData>
</urn:reportsFilter>

```

ResponseItemOptions

Description

ResponseItemOptions holds the Options type and it enables you to limit the data that is returned in a response.

Parameters

Name	Type	Description
options	Extension. See Options [page 171] .	Options extension base. Holds a name value pairing for future elements.
sections	SectionsOption [page 179]	Enumeration element that controls the sections of an item that should be returned.
specifiedSections	string	If SECTIONS-SPECIFIED is used in the sections element above, enter the specified section or sections here. The available options are described below in the Usage section.
limitedField	FieldIdentifier [page 99]	Enables you to limit the return results based on one or more fields that you identify.

Usage

The ResponseItemOptions type is used to limit the return results based on item sections or specific fields that you identify.

You use the following parameters to control the amount of data that is returned in the response:

- **sections** and **specifiedSections** – Use these elements to specify which parts of an item should be returned in order to limit the data that is returned for a given item. The sections that are not specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want. For more information, see [SectionsOption \[page 179\]](#).

In the sections parameter, specify one of the following enumeration options:

- **SECTIONS-ALL** – Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value.
- **SECTIONS-NONE** – No sections are returned (only the ItemIdentifier is returned). Note that the ItemIdentifier is always returned, regardless of the value or values specified in the sections parameter.
- **SECTIONS-SPECIFIED** – Returns sections that you specify.

You can use a comma-separated list in specifiedSections to return only the sections of an item you want. For example:

```
<urn:specifiedSections>SECTION:FIXED,SECTION:EXTENDED</urn:specifiedSections>
```

This ensures that only the fixed and extended sections of an item are returned. Here are some of the possible sections you can specify:

- **SECTION:FIXED** – All parameters in TTItem (from <urn:itemType> to <urn:url>) prior to the extendedField parameter are returned.

- **SECTION:EXTENDED** – Returns all of the extendedFields in TTIItem.
- **SECTION:ATTACHMENTS** – Returns all of the attachment sections of TTIItem. You can return the next four sections simply by specifying:

```
<urn:specifiedSections>SECTION:ATTACHMENTS</urn:specifiedSections>
```

- **SECTION:NOTES** – Returns all note sections of TTIItem.
- **SECTION:ITEMLINKS** – Returns all itemLink sections of TTIItem.
- **SECTION:URLATTACHMENTS** – Returns all urlAttachment sections of TTIItem.
- **SECTION:FILEATTACHMENTS** – Returns all fileAttachment sections of TTIItem.



Note: If you specify SECTION:NONE after other sections, those preceding sections will not be returned. For example, SECTION:FIXED,SECTION:NONE,SECTION:EXTENDED will only return the extendedField sections.

- **limitedField** – Use the limitedField element to use specific fields to limit the item data that is returned. For example, you can specify one or more fields to limit a service response to return only the fields that you want to return. In the event that limitedField contradicts the sections value, the sections specification takes precedence. The following XML shows how to limit return results using the limitedField option.

```
<urn:limitedField>
  <urn:displayName>Severity</urn:displayName>
  <urn:id>69</urn:id>
  <urn:uuid>f4eff572-2e29-4d7f-8478-8e9e16865c2c</urn:uuid>
  <urn:dbName>SEVERITY</urn:dbName>
</urn:limitedField>
```

XML

The following XML shows ResponseItemOptions in the <urn:options> element of a typical call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:EXTENDED</urn:specifiedSections>
  <urn:limitedField></urn:limitedField>
</urn:options>
```

RoleInfo

Description

The RoleInfo type holds the name and assignment information about roles for users and groups. The RoleInfo type parameters are listed below.

Parameters

Name	Type	Description
id	RoleIdentifier [page 121]	Holds the complete identification information and associated project for a role.
access	GrantState [page 104]	Enumeration element that holds role assignment information.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The RoleInfo type contains the role name and how the role is currently assigned. The GetUserRoles and GetGroupRoles calls return lists of RoleInfo records that are assigned to particular users or groups.

XML

The following XML shows RoleInfo as seen in the <urn:role> element in a typical call.

```
<urn:SetGroupRoles>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password>sa</urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:displayName>IDM View Only</urn:displayName>
  </urn:group>
  <urn:role>
    <urn:id>
      <urn:displayName>IDM Team</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
    <urn:access>GRANTED</urn:access>
  </urn:role>
  <urn:role>
    <urn:id>
      <urn:displayName>IDM Administrator</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
  </urn:role>
</urn:SetGroupRoles>
```

```
</urn:id>
  <urn:access>INHERITED</urn:access>
</urn:role>
</urn:SetGroupRoles>
```

SectionsOption

Description

SectionsOption indicates the sections that should be returned for a record.

Parameters

Name	Type	Description
SECTIONS-ALL	string	Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value.
SECTIONS-NONE	string	No sections are returned (only the Identifier is returned). Note that the Identifier element is always returned, regardless of the value or values specified in the sections parameter.
SECTIONS-SPECIFIED	string	Returns sections that you specify.

Usage

Use the `sections` and `specifiedSections` arguments to specify which parts of a record should be returned in order to limit the total amount of data that is returned. The sections that are not specified are not included in the response. For example, if the items that you want to return have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want. If you only need basic user information in the `GetUsers` response, use the `specifiedSections` parameter to return only the `STANDARD` section. If you need basic user information and group information, specify `STANDARD` and `GROUPS`.

In the `sections` parameter, specify one of the following enumeration options:

- **SECTIONS-ALL** – Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value. For example:

```
<urn:sections>SECTIONS-ALL</urn:sections>
<urn:specifiedSections></urn:specifiedSections>
```

- **SECTIONS-NONE** – No sections are returned (only the Identifier element is returned). For example:

```
<urn:sections>SECTIONS-NONE</urn:sections>
<urn:specifiedSections></urn:specifiedSections>
```



Note: The Identifier is always returned, regardless of the value or values specified in the sections parameter.

- **SECTIONS-SPECIFIED** – Returns sections that you specify. For example:

```
<urn:sections>SECTIONS-SPECIFIED</urn:sections>
<urn:specifiedSections>SECTION:EXTENDED</urn:specifiedSections>
```

You can also use a comma-separated list in `specifiedSections` to return only the sections of a record that you want. For example:

```
<urn:specifiedSections>SECTION:FIXED,SECTION:EXTENDED</urn:specifiedSections>
```

This ensures that only the fixed and extended sections of an item are returned. Below are the sections that you can specify for items:

- **SECTION:FIXED** – All parameters in `TTItem` (from `<urn:itemType>` to `<urn:url>`) prior to the `extendedField` parameter are returned.
- **SECTION:EXTENDED** – Returns all of the `extendedFields` in `TTItem`.
- **SECTION:ATTACHMENTS** – Returns all of the attachment sections of `TTItem`. You can return the next four sections simply by specifying:

```
<urn:specifiedSections>SECTION:ATTACHMENTS</urn:specifiedSections>
```

- **SECTION:NOTES** – Returns all note sections of `TTItem`.
- **SECTION:ITEMLINKS** – Returns all `itemLink` sections of `TTItem`.
- **SECTION:URLATTACHMENTS** – Returns all `urlAttachment` sections of `TTItem`.
- **SECTION:FILEATTACHMENTS** – Returns all `fileAttachment` sections of `TTItem`.

Below are the possible sections that you can specify for user records:

- **SECTION:STANDARD** – Returns parameters from `UserInfo` such as the `accessType`, e-mail address, contact, date and time information, phone number, locale, and the various display preferences.
- **SECTION:GROUPS** – Returns one or more `GroupIdentifiers` for each group to which the user belongs.
- **SECTION:SOLUTIONS** – Returns the `preferredSolution` and `solutionData` elements.



Note: If you specify `SECTION:NONE` after other sections, those preceding sections will not be returned. For example, `SECTION:FIXED,SECTION:NONE,SECTION:EXTENDED` will only return the `extendedField` sections. For the `GetUsers` call, `SECTION:STANDARD,SECTION:NONE,SECTION:GROUPS` will only return the `groups` section.

XML

The following XML shows `SectionsOption` in the `<urn:sections>` element of a typical call.

```
<urn:options>
  <urn:extraOption>
```

```

    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:FIXED</urn:specifiedSections>
  </urn:limitedField>
</urn:options>

```

Set-Value-By

Description

Set-Value-By indicates how the value in the NameValue type should be set.

Parameters

Name	Type	Description
PRECEDENCE-VALUE	string	If the PRECEDENCE-VALUE is chosen, then the value will be set by looking at the values supplied in order of precedence.
INTERNAL-VALUE	string	Set the value using the internal value
UUID-VALUE	string	Set the value using the UUID value.
DISPLAY-VALUE	string	Set the value using the display value

Usage

If the PRECEDENCE-VALUE is chosen or the Set-Value-By parameter is omitted, then the value will be set by looking at the values supplied in order of precedence. The order is internal, uuid, followed by display. For example, if the internal value is present, it will be used. If the internal value is not present, the uuid value will be used. If neither the internal or uuid values are specified, the display value will be used.

You can use the setValueBy element to specify which type of value it is, though it is not required. The setValueBy element is mainly used if you are passing in an empty value. Otherwise, SBM will determine which type of value is set by checking for a non-empty value.

To set an empty value, you must use the SET-VALUE-BY parameter that corresponds to the empty `<value>` parameter. For example, to set an empty value for a field using the internalValue parameter, you could specify:

```

<urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
<urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
<urn:value>
  <urn:internalValue></urn:internalValue>

```

Alternatively, to set an empty value for a field using the `displayValue` parameter, you could specify:

```
<urn:setValueBy>DISPLAY-VALUE</urn:setValueBy>
<urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
<urn:value>
  <urn:displayValue></urn:displayValue>
```



Note: To set an empty value for a Single or Multi-Relational field, you must use `INTERNAL-VALUE` in `SetValueBy` and empty tags in the `internalValue` parameter.

XML

The following XML shows `Set-Value-By` in the `<urn:extendedField>` element in a typical call.

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>Severity</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>SEVERITY</urn:dbName>
  </urn:id>
  <urn:setValueBy>PRECEDENCE-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>High</urn:displayValue>
    <urn:internalValue>122</urn:internalValue>
    <urn:uuid>4ad0961d-30dc-4198-8167-5224dcb6c065</urn:uuid>
  </urn:value>
</urn:extendedField>
```

Set-Value-Method

Description

`Set-Value-Method` indicates how to process values in a text field or any field that contains multiple values such as Multi-Selection, Multi-Relational, Multi-Group, or Multi-User.

Parameters

Name	Type	Description
REPLACE-VALUES	string	If you choose <code>REPLACE-VALUES</code> , <code>Set-Value-Method</code> replaces the current value. Applies to all fields. If a <code>Set-Value-Method</code> is not specified, <code>REPLACE-VALUES</code> is assumed by default.
APPEND-VALUES	string	If you choose <code>APPEND-VALUES</code> , <code>Set-Value-Method</code> appends the value to the previous entry. Applies to Text and all multi-value fields.
REMOVE-VALUES	string	If you choose <code>REMOVE-VALUES</code> , <code>Set-Value-Method</code> removes the value. Only applies to multi-value fields.

Usage

You can use Set-Value-Method to specify how text fields or any field that holds multiple values should process the value or values that are passed in the setValueBy argument. For example, you could use this argument to *replace* one or more values in a Multi-Relational field, *append* new text to a Journal field, or *remove* specified values from a Multi-Selection list. Specifying a Set-Value-Method parameter is useful if you plan to have multiple Web service calls updating the same field on the same item. By using Set-Value-Method, field values can be managed dynamically; there is no need to ensure that the last update made contains the definitive selections for a given field. Otherwise, if Set-Value-Method is not supplied, the values will be replaced or an empty value will be set, depending on how the value or values are sent.

XML

The following XML snippets show each Set-Value-Method in the `<urn:extendedField>` element, with a brief description of the results.

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>Text Field</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>TEXT_FIELD</urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>11</urn:displayValue>
    <urn:internalValue>11</urn:internalValue>
  </urn:value>
</urn:extendedField>
<urn:extendedField>
  <urn:id>
    <urn:displayName>Text Field</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>TEXT_FIELD</urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>APPEND-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>22</urn:displayValue>
    <urn:internalValue>22</urn:internalValue>
  </urn:value>
</urn:extendedField>
```

This call would replace the current text field value with "11" and then append "22" to that value:

11 22

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>WCRS</urn:displayName>
```

```
<urn:id></urn:id>
<urn:uuid></urn:uuid>
<urn:dbName>WCRS</urn:dbName>
</urn:id>
<urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
<urn:setValueMethod>REPLACE-VALUES</urn:setValueMethod>
<urn:value>
  <urn:displayValue>ZMF00026: Release Package - Construction</urn:displayValue>
  <urn:internalValue>1015:10</urn:internalValue>
  <urn:uuid>af93aad0-8245-4e49-ac91-574725f7041f</urn:uuid>
</urn:value>
<urn:value>
  <urn:displayValue>ZMF00028: Release Package - Construction</urn:displayValue>
  <urn:internalValue>1015:11</urn:internalValue>
  <urn:uuid>e16d9550-c2bc-41b9-99c6-f716cb5a7022</urn:uuid>
</urn:value>
</urn:extendedField>
```

This call would replace the current selections in the Multi-Relational WCRS field with two new records (10 and 11) from table 1015.

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>WCRS</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>WCRS</urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>APPEND-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>ZMF00032: Release Unit - Construction</urn:displayValue>
    <urn:internalValue>1015:12</urn:internalValue>
    <urn:uuid>15ce4bc2-347e-41bb-acaf-f3dd434a9633</urn:uuid>
  </urn:value>
  <urn:value>
    <urn:displayValue>ZMF00033: Release Unit - Construction</urn:displayValue>
    <urn:internalValue>1015:13</urn:internalValue>
    <urn:uuid>5e8d1cb0-b177-4aa5-ae8c-bd169e31f6da</urn:uuid>
  </urn:value>
</urn:extendedField>
```

This call would add two additional selections to the Multi-Relational WCRS field. Records 12 and 13 from table 1015 would now be selected in this field along with the previous selections that were made in the field.

```
<urn:extendedField>
  <urn:id>
    <urn:displayName>WCRS</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>WCRS</urn:dbName>
  </urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
```

```

<urn:setValueMethod>REMOVE-VALUES</urn:setValueMethod>
<urn:value>
  <urn:displayValue>ZMF00032: Release Unit - Construction</urn:displayValue>
  <urn:internalValue>1015:12</urn:internalValue>
  <urn:uuid>15ce4bc2-347e-41bb-acaf-f3dd434a9633</urn:uuid>
</urn:value>
<urn:value>
  <urn:displayValue>ZMF00026: Release Package - Construction</urn:displayValue>
  <urn:internalValue>1015:10</urn:internalValue>
  <urn:uuid>af93aad0-8245-4e49-ac91-574725f7041f</urn:uuid>
</urn:value>
</urn:extendedField>

```

This call would simply remove records 10 and 12 from the Multi-Relational WCRS field.

```

<urn:extendedField>
  <urn:id>
    <urn:displayName>Colors</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:dbName>COLORS</urn:dbName>
  </urn:id>
  <urn:id>178</urn:id>
  <urn:setValueBy>INTERNAL-VALUE</urn:setValueBy>
  <urn:setValueMethod>REMOVE-VALUES</urn:setValueMethod>
  <urn:value>
    <urn:displayValue>Red</urn:displayValue>
    <urn:internalValue>5</urn:internalValue>
  </urn:value>
  <urn:value>
    <urn:displayValue>Green</urn:displayValue>
    <urn:internalValue>6</urn:internalValue>
  </urn:value>
</urn:extendedField>

```

This call would remove the "Red" and "Green" selections from the Multi-Selection "Colors" field.

UserResponseOptions

Description

UserResponseOptions holds the UserSingleResponseOptions type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing.

Parameters

Name	Type	Description
UserSingleResponseOptions	Extension. See UserSingleResponseOptions [page 187] .	UserSingleResponseOptions extension base. Holds a name value pairing for future elements and enables you to limit the data returned in the response.
multiOption	MultipleOption [page 164]	Enumeration element that holds the option to continue processing or stop when an error is encountered.

Usage

The UserResponseOptions contains the same functionality as UserSingleResponseOptions, but it also enables you to specify an enumeration value that determines if the service should continue processing or stop when an error is encountered.

You use the following parameters in UserSingleResponseOptions to control service handling and the amount of data that is returned in the response:

- **sections** and **specifiedSections** – Use these elements to specify which parts of a user record should be returned in order to limit the amount of data that is returned. The sections that are not specified are not included in the response. For example, if you only need basic user information in the response, use the specifiedSections parameter to return only the STANDARD section. If you need basic user information and group information, specify STANDARD and GROUPS. For more information, see [SectionsOption \[page 179\]](#).

In the sections parameter, specify one of the following enumeration options:

- **SECTIONS-ALL** – Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value.
- **SECTIONS-NONE** – No sections are returned (only the UserIdentifier is returned). Note that the UserIdentifier is always returned, regardless of the value or values specified in the sections parameter.
- **SECTIONS-SPECIFIED** – Returns sections that you specify.

You can use a comma-separated list in specifiedSections to return only the sections of a user record that you want. For example:

```
<urn:specifiedSections>SECTION:STANDARD,SECTION:GROUPS</urn:specifiedSections>
```

This ensures that only the standard and groups sections of a user record are returned. Here are some of the possible sections you can specify in GetUsers:

- **SECTION:STANDARD** – Returns parameters from UserInfo such as the accessType, e-mail address, contact, date and time information, phone number, locale, and the various display preferences.
- **SECTION:GROUPS** – Returns one or more GroupIdentifiers for each group to which the user belongs.
- **SECTION:SOLUTIONS** – Returns the preferredSolution and solutionData elements.



Note: If you specify SECTION:NONE after other sections, those preceding sections will not be returned. For example, SECTION:STANDARD,SECTION:NONE,SECTION:GROUPS will only return the groups section.

- **multiOption** – Use the multiOption element to specify whether the service should continue if an error is encountered or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. If you specify CONTINUE-ON-FAILURE, then failures do not result in a return before all records have been processed. For more information, see [MultipleOption \[page 164\]](#).

XML

The following XML shows UserResponseOptions in the <urn:options> element of the GetUsers call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:STANDARD</urn:specifiedSections>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>
```

UserSingleResponseOptions

Description

UserSingleResponseOptions holds the Options type and enables you to limit the data that is returned in a response.

Parameters

Name	Type	Description
options	Extension. See Options [page 171] .	Options extension base. Holds a name value pairing for future elements.

Name	Type	Description
sections	SectionsOption [page 179]	Enumeration element that controls the sections of a user record that should be returned.
specifiedSections	string	If SECTIONS-SPECIFIED is used in the sections element above, enter the specified section or sections here. The available options are described below in the Usage section.

Usage

The UserSingleResponseOptions type is used to limit the return results based on specific sections that you identify.

You use the following parameters to control the amount of data that is returned in the response:

- **sections** and **specifiedSections** – Use these elements to specify which parts of a user record should be returned in order to limit the amount of data that is returned. The sections that are not specified are not included in the response. For example, if you only need basic user information in the response, use the specifiedSections parameter to return only the STANDARD section. If you need basic user information and group information, specify STANDARD and GROUPS. For more information, see [SectionsOption \[page 179\]](#).

In the sections parameter, specify one of the following enumeration options:

- **SECTIONS-ALL** – Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value.
- **SECTIONS-NONE** – No sections are returned (only the UserIdentifier is returned). Note that the UserIdentifier is always returned, regardless of the value or values specified in the sections parameter.
- **SECTIONS-SPECIFIED** – Returns sections that you specify.

You can use a comma-separated list in specifiedSections to return only the sections of a user record that you want. For example:

```
<urn:specifiedSections>SECTION:STANDARD,SECTION:GROUPS</urn:specifiedSections>
```

This ensures that only the standard and groups sections of a user record are returned. Here are some of the possible sections you can specify in GetUsers:

- **SECTION:STANDARD** – Returns parameters from UserInfo such as the accessType, e-mail address, contact, date and time information, phone number, locale, and the various display preferences.
- **SECTION:GROUPS** – Returns one or more GroupIdentifiers for each group to which the user belongs.
- **SECTION:SOLUTIONS** – Returns the preferredSolution and solutionData elements.



Note: If you specify SECTION:NONE after other sections, those preceding sections will not be returned. For example, SECTION:STANDARD,SECTION:NONE,SECTION:GROUPS will only return the groups section.

XML

The following XML shows UserSingleResponseOptions in the <urn:options> element of the GetUsers call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:STANDARD</urn:specifiedSections>
</urn:options>
```

Responses

This section provides detailed descriptions of SBM Application Web service responses. The responses are the data elements that are returned from SBM Application Web service operations. The responses listed here contain one or more parameters, which make up the data being sent back from the Web service. The parameters listed in each argument are either simple or complex types themselves. If the type is complex, a link to further detail of that type is provided in the **Type** column.

The following table lists all supported responses in alphabetical order, followed by a brief description of each type. Select a response to view detailed information including:

- **Description** – A brief description of the response.
- **Parameters** – A table that describes the simple and complex types for each response. For each complex type, click the type name for a detailed description.
- **Usage** – Any notes, additional details, and considerations are addressed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Responses

Response	Description
AccessType [page 192]	Holds the user's product access type.
ApplicationData [page 193]	Holds the name and other information about an application.
DatePreference [page 195]	Indicates a user's preferred date format.
Field [page 195]	Used to completely describe a field.
FieldSelectionsHolder [page 197]	Holds information about a field, its selection type, selection style, and its values.
Field-Type [page 199]	Indicates the type of field.
FieldWithValue [page 201]	Combines the Field response type with the field's value.
GetReportsResult [page 202]	Holds the number of reports returned, as well as high-level information for each report.
GetStateChangeHistoryResult [page 204]	Holds the state change history for an item and the query range used to return the history.
GroupMembersHolder [page 205]	Holds a group name and users that belong to that group.
ModScriptHolder [page 207]	Holds the results of a RunModscript call.
NoteLoggerInfo [page 208]	Holds the e-mail address of the E-mail Recorder.
OrderBy [page 208]	Holds the ORDER BY definition for a report.
Point [page 209]	Identifies the location of an object in the graphical workflow.
PrivilegeHolder [page 210]	Holds privilege information and any applicable error messages.

Response	Description
ProjectData [page 211]	Holds the name and other information about a project.
ReportDefinition [page 212]	Holds the columns and any ORDER BY definition for a report.
ReportInfo [page 213]	Holds a high-level description for a report.
ReportResult [page 215]	Holds the actual item data returned in a report.
RoleHolder [page 217]	Holds role information and any applicable error messages.
RunReportResult [page 217]	Holds the results or output of a report.
RunReportXmlResult [page 223]	Holds the results or output of a report in XML format.
SelectionOption [page 224]	Holds information about field selections.
Size [page 225]	Holds information about the size of objects in the graphical workflow.
SolutionData [page 226]	Holds the name and other information about a solution.
StateChangeHistory [page 228]	Holds the state change history for an item.
Status [page 229]	Holds status information for a Web service operation.
StatusEnum [page 230]	Indicates the type of status.
TableData [page 230]	Holds the name and other information about a table.
TimePreference [page 232]	Indicates a user's preferred time format.
Transition [page 232]	Holds the name and other information about a transition.

Response	Description
TTItemHolder [page 234]	Holds all of the SBM field information for an item and any applicable error messages.
TTItemList [page 237]	Contains the items and the total count of items that are returned from GetItemsByQuery.
UserHolder [page 238]	Holds user information and any applicable error messages.
UserInfo [page 242]	Holds the name and additional information about a user.
UserSolutionData [page 247]	Holds an ordered-list of applications that are accessible to a user. Also returns the user's home page report for each application and the preferred project list.
Workflow [page 248]	Holds information about a graphical workflow.
WorkflowBand [page 251]	Holds graphical workflow information for a swimlane.
WorkflowComment [page 252]	Hold graphical workflow information for an annotation.
WorkflowHolder [page 254]	Holds graphical workflow information and any applicable error messages.
WorkflowState [page 257]	Holds graphical workflow information for a state.
WorkflowTransition [page 258]	Holds graphical workflow information for a transition.

AccessType

Description

AccessType indicates the type of product-access a user is granted. The product access is used to determine the possible privileges that are available to users.

Parameters

Name	Type	Description
ACCESS-NONE	string	Indicates that the user's product access is set to None.
ACCESS-USER	string	Indicates Regular User product access.
ACCESS-OCCASIONAL	string	Indicates Occasional User product access.
ACCESS-EXTERNAL	string	Indicates External User product access.
ACCESS-ADMIN	string	Indicates Managed Administrator product access.
ACCESS-APIScript	string	Indicates API/Script product access.
ACCESS-LEAVE-UNCHANGED	string	Do not change the current date product access. Sent by default if not specified.

Usage

The AccessType enumeration indicates the product access that is set for a user that is returned by the GetUsers call. For more information about each product access type, see the *SBM Application Administrator Guide*.

XML

The following XML shows AccessType in the return element of the GetUsers response.

```
<ae:accessType>ACCESS-USER</ae:accessType>
```

ApplicationData

Description

The ApplicationData type holds the name and other information about an application in SBM. The ApplicationData type parameters are listed below.

Parameters

Name	Type	Description
application	ApplicationIdentifier [page 95]	Holds the complete identification information for an application.
description	string	The description of the application. Derived from the TS_DESCRIPTION column in TS_APPLICATIONS.

Name	Type	Description
appDefUUID	string	The unique identifier that applies to the process app definition in the Application Repository repository.
revision	string	The revision number.

Usage

The ApplicationData type holds ApplicationIdentifier, description, and UUID used to describe an application. You can use [GetApplications \[page 48\]](#) to retrieve the application data shown here.

XML

The following XML snippet shows the ApplicationData type in the return element of the GetApplications response.

```
<ae:GetApplicationsResponse>
  <ae:return>
    <ae:application xsi:type="ae:ApplicationIdentifier">
      <ae:displayName>Global Process App (eval)</ae:displayName>
      <ae:id>1</ae:id>
      <ae:uuid>global-d0f243dd-5ba7-44aa-a7fe-db1bd8a9c3bd</ae:uuid>
    </ae:application>
    <ae:description/>
    <ae:appDefUUID/>
    <ae:revision/>
  </ae:return>
  <ae:return>
    <ae:application xsi:type="ae:ApplicationIdentifier">
      <ae:displayName>Issue Defect Management</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>d365ac15-6b52-47a5-b82c-259e4591d022</ae:uuid>
    </ae:application>
    <ae:description>This process app manages the capture, triage and resolution
    process for software or hardware issues (bugs).</ae:description>
    <ae:appDefUUID/>
    <ae:revision/>
  </ae:return>
  <ae:return>
    <ae:application xsi:type="ae:ApplicationIdentifier">
      <ae:displayName>Incident Management</ae:displayName>
      <ae:id>3</ae:id>
      <ae:uuid>955e8e0e-9342-46ed-ba06-d1bfdc1cdf80</ae:uuid>
    </ae:application>
    <ae:description>Provides simple Incident Management functionality
    →for small Support teams.</ae:description>
    <ae:appDefUUID/>
    <ae:revision>-</ae:revision>
  </ae:return>
</ae:GetApplicationsResponse>
```

DatePreference

Description

DatePreference indicates a user's preferred date format. The available options are listed below.

Parameters

Name	Type	Description
DATE-FORMAT-FROM-LOCALE	string	Use the format based on the user's locale.
DATE-FORMAT-MM-DD-YYYY	string	Use a MM-DD-YYYY format for dates.
DATE-FORMAT-DD-MM-YYYY	string	Use a DD-MM-YYYY format for dates.
DATE-FORMAT-DD-MM-YYYY.S	string	Use a DD.MM.YYYY format for dates.
DATE-FORMAT-YYYY-MM-DD	string	Use a YYYY-MM-DD format for dates.
DATE-FORMAT-LEAVE-UNCHANGED	string	Do not change the current date format. Sent by default if not specified.

Usage

DatePreference is used to determine how dates display to users. The various date formats are returned in the datePreference parameter of the GetUsers response. See [UserInfo \[page 242\]](#) for more information.

XML

The following XML shows DatePreference as seen in the return element of the GetUsers call.

```
<ae:datePreference>DATE-FORMAT-MM-DD-YYYY</ae:datePreference>
```

Field

Description

The Field type holds the name and other information about a field in SBM. The field type parameters are listed below.

Parameters

Name	Type	Description
field	FieldIdentifier [page 99]	Holds the identification information for a field.
fieldType	Field-Type [page 199]	Describes the type of field.
attribute	integer	Indicates a field attribute. Used to describe types of text fields, numeric fields, date/time, and binary fields as described in the TS_FIELDS table in the <i>SBM Database Schema Reference Guide</i> guide.
properties	integer	Indicates field properties. Used to indicate read-only status, numeric field calculation settings, and whether or not to display field values as checkboxes as described in the TS_FIELDS table in the <i>SBM Database Schema Reference Guide</i> guide.

Usage

The Field type completely describes an available field in SBM. Use GetTables to retrieve a list of fields available for a specified table. The list of fields appears in the field element.

XML

The following XML snippet shows the Field type in the fieldList element of the GetTables response.

```
<ae:GetTablesResponse>
  <ae:return>
    <ae:table xsi:type="ae:TableIdentifier">
      <ae:displayName>Issues</ae:displayName>
      <ae:id>1000</ae:id>
      <ae:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</ae:uuid>
      <ae:dbName>UBG_ISSUES</ae:dbName>
    </ae:table>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Issue Defect Management</ae:displayName>
      <ae:id>1</ae:id>
      <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
      <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
      <ae:tabName>IDM</ae:tabName>
    </ae:solution>
    <ae:type>PRIMARY-TABLE</ae:type>
    <ae:description/>
    <ae:field>
      <ae:field xsi:type="ae:FieldIdentifier">
        <ae:displayName>Type</ae:displayName>
        <ae:id>52</ae:id>
        <ae:uuid>7718fd10-ff7a-4fc9-9f8e-581820cb77bf</ae:uuid>
```

```

        <ae:dbName>ISSUETYPE</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-SELECTION</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
</ae:field>
</ae:return>
</ae:GetTablesResponse>

```

FieldSelectionsHolder

Description

The FieldSelectionsHolder type contains the GetFieldSelections response and any errors for fields that were not successfully returned. The FieldSelectionsHolder type parameters are listed below.

Parameters

Name	Type	Description
field	FieldIdentifier [page 99]	Holds the identification information for a field.
type	Selection-Type [page 121]	Indicates the type of field selection.
attribute	Field-Attribute [page 98]	Indicates the style or selection mode for <i>Binary/Trinary</i> fields.
option	SelectionOption [page 224]	Holds identification information and ordering information for a field selection.
status	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The FieldSelectionsHolder type returns available field selections for *Single Selection*, *Multi-Selection*, and *Binary/Trinary* fields that are specified in the GetFieldSelections call. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML shows FieldSelectionsHolder as seen in GetFieldSelectionsResponse.

```

<ae:GetFieldSelectionsResponse>
  <ae:return>
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Active/Inactive</ae:displayName>
      <ae:id>80</ae:id>
    </ae:field>
  </ae:return>
</ae:GetFieldSelectionsResponse>

```

```
<ae:uuid>e90174d9-76fa-4ac2-b2bd-13944626c685</ae:uuid>
<ae:dbName>ACTIVEINACTIVE</ae:dbName>
</ae:field>
<ae:type>BINARY-SELECTION</ae:type>
<ae:attribute>BINARY-ATTRIBUTE-LISTBOX</ae:attribute>
<ae:option>
  <ae:id>
    <ae:displayName>Active</ae:displayName>
    <ae:id>0</ae:id>
  </ae:id>
  <ae:orderIndex>0</ae:orderIndex>
</ae:option>
<ae:option>
  <ae:id>
    <ae:displayName>Inactive</ae:displayName>
    <ae:id>1</ae:id>
  </ae:id>
  <ae:orderIndex>1</ae:orderIndex>
</ae:option>
</ae:return>
<ae:return>
  <ae:field xsi:type="ae:FieldIdentifier">
    <ae:displayName>Priority</ae:displayName>
    <ae:id>73</ae:id>
    <ae:uuid>3141e866-7b20-4916-af87-9de705cc4b43</ae:uuid>
    <ae:dbName>PRIORITY</ae:dbName>
  </ae:field>
  <ae:type>SINGLE-SELECTION</ae:type>
  <ae:option>
    <ae:id>
      <ae:displayName>1</ae:displayName>
      <ae:id>18</ae:id>
      <ae:uuid>2270dd22-6c3a-437b-babf-42e59f3ca08a</ae:uuid>
    </ae:id>
    <ae:orderIndex>0</ae:orderIndex>
  </ae:option>
  <ae:option>
    <ae:id>
      <ae:displayName>2</ae:displayName>
      <ae:id>19</ae:id>
      <ae:uuid>e880ba36-5744-44ca-acfd-b7eb09aee99d</ae:uuid>
    </ae:id>
    <ae:orderIndex>1</ae:orderIndex>
  </ae:option>
  <ae:option>
    <ae:id>
      <ae:displayName>3</ae:displayName>
      <ae:id>20</ae:id>
      <ae:uuid>a79ad52e-aa2d-4cc3-a2e3-f284dd85810e</ae:uuid>
    </ae:id>
    <ae:orderIndex>2</ae:orderIndex>
  </ae:option>
  <ae:option>
    <ae:id>
      <ae:displayName>4</ae:displayName>
```

```

        <ae:id>21</ae:id>
        <ae:uuid>611aldaa-d1d3-4b88-85d3-c7964af578fa</ae:uuid>
    </ae:id>
    <ae:orderIndex>3</ae:orderIndex>
</ae:option>
<ae:option>
    <ae:id>
        <ae:displayName>5</ae:displayName>
        <ae:id>22</ae:id>
        <ae:uuid>2cf46646-d56d-492b-88e8-6e3b252081f7</ae:uuid>
    </ae:id>
    <ae:orderIndex>4</ae:orderIndex>
</ae:option>
</ae:return>
<ae:return>
    <ae:field xsi:type="ae:FieldIdentifier">
        <ae:displayName>Functional Areas</ae:displayName>
        <ae:id>188</ae:id>
        <ae:uuid>c2e67944-af40-4153-be79-3cce0fd8e17c</ae:uuid>
        <ae:dbName>FUNCTIONAL_AREAS</ae:dbName>
    </ae:field>
    <ae:type>MULTI-SELECTION</ae:type>
    <ae:option>
        <ae:id>
            <ae:displayName>Administrator Tool</ae:displayName>
            <ae:id>65</ae:id>
            <ae:uuid>46da9a27-12eb-428f-bbfd-830540973269</ae:uuid>
        </ae:id>
        <ae:orderIndex>0</ae:orderIndex>
    </ae:option>
    <ae:option>
        <ae:id>
            <ae:displayName>End User Interface</ae:displayName>
            <ae:id>66</ae:id>
            <ae:uuid>3514834d-e105-47fa-ba85-3b2fa847e120</ae:uuid>
        </ae:id>
        <ae:orderIndex>1</ae:orderIndex>
    </ae:option>
    <ae:option>
        <ae:id>
            <ae:displayName>Installer</ae:displayName>
            <ae:id>67</ae:id>
            <ae:uuid>3988a7d9-277e-473f-8b15-9b9842ab01b7</ae:uuid>
        </ae:id>
        <ae:orderIndex>2</ae:orderIndex>
    </ae:option>
</ae:return>
</ae:GetFieldSelectionsResponse>

```

Field-Type

Description

Field-Type indicates the type of field. The available field types are listed below.

Parameters

Name	Type	Description
FLDTYPE_UNKNOWN	string	Indicates an unknown field.
FLDTYPE_NUMERIC	string	Indicates a numeric field.
FLDTYPE_TEXT	string	Indicates a text field.
FLDTYPE_DATETIME	string	Indicates a date/time field.
FLDTYPE_SELECTION	string	Indicates a single select field.
FLDTYPE_BINARY	string	Indicates a binary field.
FLDTYPE_STATE	string	Indicates a state field.
FLDTYPE_USER	string	Indicates a user field.
FLDTYPE_PROJECT	string	Indicates a project field.
FLDTYPE_SUMMATION	string	Indicates a summation field.
FLDTYPE_MULTIPLE_SELECTION	string	Indicates a multi-select field.
FLDTYPE_CONTACT	string	Indicates a contact field.
FLDTYPE_INCIDENT	string	Indicates a field unique to Incidents.
FLDTYPE_FOLDER	string	Indicates a folder type field.
FLDTYPE_RELATIONAL	string	Indicates a single relational field.
FLDTYPE_SUBRELATIONAL	string	Indicates a sub-relational field.
FLDTYPE_SYSTEM	string	Indicates a system field.
FLDTYPE_MULTIPLE_RELATIONAL	string	Indicates a multi-relational field.
FLDTYPE_MULTIPLE_GROUP	string	Indicates a multi-group field.
FLDTYPE_MULTIPLE_USERGROUP	string	Indicates a multi-user field.

Usage

Field-Type can be used to identify the type of field that is returned in the GetTables response.

XML

The following XML shows Field-Type in the GetTables response.

```
<ae:GetTablesResponse>
  <ae:return>
    <ae:table xsi:type="ae:TableIdentifier">
      <ae:displayName>Issues</ae:displayName>
      <ae:id>1000</ae:id>
      <ae:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</ae:uuid>
      <ae:dbName>UBG_ISSUES</ae:dbName>
    </ae:table>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Issue Defect Management</ae:displayName>
      <ae:id>1</ae:id>
      <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
      <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
      <ae:tabName>IDM</ae:tabName>
    </ae:solution>
    <ae:type>PRIMARY-TABLE</ae:type>
    <ae:description/>
    <ae:field>
      <ae:field xsi:type="ae:FieldIdentifier">
        <ae:displayName>Type</ae:displayName>
        <ae:id>52</ae:id>
        <ae:uuid>7718fd10-ff7a-4fc9-9f8e-581820cb77bf</ae:uuid>
        <ae:dbName>ISSUETYPE</ae:dbName>
      </ae:field>
      <ae:fieldType>FLDTYPE-SELECTION</ae:fieldType>
      <ae:attribute>0</ae:attribute>
      <ae:properties>0</ae:properties>
    </ae:field>
  </ae:return>
</ae:GetTablesResponse>
```

FieldWithValue

Description

The FieldWithValue type is used to completely describe a field value pairing in SBM. The FieldWithValue parameters are listed below.

Parameters

Name	Type	Description
field	Extension. See Field [page 195] .	Used to completely describe a field.
value	FieldValue [page 100]	Holds the generic identification information for a field value.

Usage

Field is used in combination with the FieldValue argument to completely describe a field value pairing in FieldWithValue.

XML

The following XML shows the <ae:fieldValue> response.

```
<ae:fieldValue xsi:type="ae:FieldWithValue">
  <ae:field xsi:type="ae:FieldIdentifier">
    <ae:displayName>Item Id</ae:displayName>
    <ae:id>53</ae:id>
    <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
    <ae:dbName>ISSUEID</ae:dbName>
  </ae:field>
  <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
  <ae:attribute>0</ae:attribute>
  <ae:properties>0</ae:properties>
  <ae:value>
    <ae:displayValue>BUG000077</ae:displayValue>
    <ae:internalValue>000077</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:fieldValue>
```

GetReportsResult

Description

The GetReportsResult type holds the number of reports returned, as well as high-level information for each report. The GetReportsResult type parameters are listed below.

Parameters

Name	Type	Description
queryRange	QueryRange [page 115]	Specifies the number of reports that are returned.
report	ReportInfo [page 213]	Holds a description of the report.

Usage

The GetReportsResult type is sent back in response to a GetReports call. GetReportsResult summarizes the range of reports returned and provides an overview of each report. The actual contents of a report are obtained in the RunReportResult response. Use the `isQueryAtRuntime` element in the response to determine if the report can be executed using the RunReport call (query at runtime reports cannot be executed by RunReport). You can use [GetReports \[page 63\]](#) to retrieve the report data shown here.

XML

The following XML snippet shows the GetReportsResult type in the return element of the GetReports response.

```
<ae:GetReportsResponse>
  <ae:return>
    <ae:queryRange>
      <ae:startIndex>0</ae:startIndex>
      <ae:fetchSize>0</ae:fetchSize>
      <ae:totalCount>1</ae:totalCount>
    </ae:queryRange>
    <ae:report>
      <ae:report xsi:type="ae:ReportIdentifier">
        <ae:displayName>SCM Association Listing</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>4440bb69-40fa-4bbe-8fd8-41f113210243</ae:uuid>
      </ae:report>
      <ae:reportURL>tmtrack.dll?ReportPage&Template=reports
      →%2Flistframe&ReportId=1</ae:reportURL>
      <ae:reportType>LISTING</ae:reportType>
      <ae:reportCategory>USERREPORTS</ae:reportCategory>
      <ae:reportAccessLevel>GUEST</ae:reportAccessLevel>
      <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Issue Defect Management</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
        <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
        <ae:tabName>IDM</ae:tabName>
      </ae:solution>
      <ae:table xsi:type="ae:TableIdentifier">
        <ae:displayName>SCM Associations</ae:displayName>
        <ae:id>1001</ae:id>
        <ae:uuid>50db5a94-645a-4e8b-9500-3f2950aa4f45</ae:uuid>
        <ae:dbName>UBG_SCM_ASSOCIATIONS</ae:dbName>
      </ae:table>
      <ae:project xsi:type="ae:ProjectIdentifier">
        <ae:displayName>Base Project</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>ROOTPROJECT</ae:uuid>
        <ae:fullyQualifiedName>Base Project</ae:fullyQualifiedName>
        <ae:internalName>BASE_PROJECT</urn:internalName>
      </ae:project>
      <ae:createdBy xsi:type="ae:UserIdentifier">
        <ae:displayName>Joe Manager</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeea777f</ae:uuid>
        <ae:loginId>joe</ae:loginId>
      </ae:createdBy>
      <ae:createDate>2009-02-05T22:10:01Z</ae:createDate>
      <ae:modifiedBy xsi:type="ae:UserIdentifier">
        <ae:displayName>Joe Manager</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeea777f</ae:uuid>
        <ae:loginId>joe</ae:loginId>
      </ae:modifiedBy>
      <ae:modifiedDate>2009-03-04T22:49:31Z</ae:modifiedDate>
      <ae:execDate>2010-09-17T18:45:19Z</ae:execDate>
      <ae:isQueryAtRuntime>true</ae:isQueryAtRuntime>
    </ae:report>
  </ae:return>
</ae:GetReportsResponse>
```

```

</ae:return>
</ae:GetReportsResponse>

```

GetStateChangeHistoryResult

Description

The GetStateChangeHistoryResult type holds the state change history for an item and the query range used to return the history. The GetStateChangeHistoryResult type parameters are listed below.

Parameters

Name	Type	Description
queryRange	QueryRange [page 115]	Specifies the number of state change history records that are returned.
stateChangeHistory	StateChangeHistory [page 228]	Holds the state change history for an item.

Usage

The GetStateChangeHistoryResult type is sent back in response to a GetStateChangeHistory call. GetStateChangeHistoryResult summarizes the range of state change records and provides detailed state change history information. See [GetStateChangeHistory](#) [page 67] for more information.

XML

The following XML snippet shows the GetStateChangeHistoryResult type in the GetStateChangeHistory response.

```

<ae:GetStateChangeHistoryResponse>
  <ae:return>
    <ae:queryRange>
      <ae:startIndex>0</ae:startIndex>
      <ae:fetchSize>2</ae:fetchSize>
      <ae:totalCount>4</ae:totalCount>
    </ae:queryRange>
    <ae:stateChangeHistory>
      <ae:newState xsi:type="ae:StateIdentifier">
        <ae:displayName>Evaluating Issue</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</ae:uuid>
        <ae:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</ae:internalName>
        <ae:isClosed>>false</ae:isClosed>
      </ae:newState>
      <ae:transition xsi:type="ae:TransitionIdentifier">
        <ae:displayName>Submit</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>a78f0a30-1305-46c2-b661-df8219c105b2</ae:uuid>
        <ae:internalName>SOFTWARE_ISSUES.SUBMIT</ae:internalName>
      </ae:transition>
    </ae:stateChangeHistory>
  </ae:return>
</ae:GetStateChangeHistoryResponse>

```

```

    </ae:transition>
    <ae:time>2009-02-05T22:04:32Z</ae:time>
    <ae:user xsi:type="ae:UserIdentifier">
      <ae:displayName>Joe Manager</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</ae:uuid>
      <ae:loginId>joe</ae:loginId>
    </ae:user>
    <ae:owner xsi:type="ae:UserIdentifier">
      <ae:displayName>Joe Manager</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</ae:uuid>
      <ae:loginId>joe</ae:loginId>
    </ae:owner>
  </ae:stateChangeHistory>
  <ae:stateChangeHistory>
    <ae:newState xsi:type="ae:StateIdentifier">
      <ae:displayName>Fixing Issue</ae:displayName>
      <ae:id>4</ae:id>
      <ae:uuid>a555a40c-7554-46f2-80bb-a6ff8b9ec917</ae:uuid>
      <ae:internalName>SOFTWARE_ISSUES.FIXING_ISSUE</ae:internalName>
      <ae:isClosed>>false</ae:isClosed>
    </ae:newState>
    <ae:transition xsi:type="ae:TransitionIdentifier">
      <ae:displayName>Fix</ae:displayName>
      <ae:id>8</ae:id>
      <ae:uuid>7d095afe-1679-4e68-b492-0ad574bcdb2b</ae:uuid>
      <ae:internalName>SOFTWARE_ISSUES.FIX</ae:internalName>
    </ae:transition>
    <ae:time>2009-02-05T22:23:06Z</ae:time>
    <ae:user xsi:type="ae:UserIdentifier">
      <ae:displayName>Joe Manager</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</ae:uuid>
      <ae:loginId>joe</ae:loginId>
    </ae:user>
    <ae:owner xsi:type="ae:UserIdentifier">
      <ae:displayName>Newton Engineer</ae:displayName>
      <ae:id>4</ae:id>
      <ae:uuid>42a11cba-c422-442e-b299-5f3fe58a40e9</ae:uuid>
      <ae:loginId>newton</ae:loginId>
    </ae:owner>
  </ae:stateChangeHistory>
</ae:return>
</ae:GetStateChangeHistoryResponse>

```

GroupMembersHolder

Description

The GroupMembersHolder type contains the Group response and any errors for records that were not successfully returned. The GroupHolder type parameters are listed below.

Parameters

Name	Type	Description
group	GroupIdentifierEx [page 106]	Holds one or more group identifiers.
member	UserIdentifierEx [page 157]	Holds one or more user identifiers.
status	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The GroupHolder type holds information about a group and its respective members. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML snippet shows GroupMembersHolder in the return element of the GetGroupMembers response.

```
<ae:GetGroupMembersResponse>
  <ae:return>
    <ae:group>
      <ae:id xsi:type="ae:GroupIdentifier">
        <ae:displayName>IDM Manager</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>b2654094-0ec6-460d-856b-9b72709d183b</ae:uuid>
      </ae:id>
    </ae:group>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Joe Manager</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeeea777f</ae:uuid>
      </ae:id>
    </ae:member>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Carmen Chief Officer</ae:displayName>
        <ae:id>10</ae:id>
        <ae:uuid>c4a1c377-569c-469a-913b-9e1e94e88f26</ae:uuid>
      </ae:id>
    </ae:member>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Zack IT Manager</ae:displayName>
        <ae:id>13</ae:id>
        <ae:uuid>6fe3057e-127d-4a67-b1bf-967bad1364d2</ae:uuid>
      </ae:id>
    </ae:member>
  </ae:return>
</ae:GetGroupMembersResponse>
```

```

    </ae:member>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Pam Doc Manager</ae:displayName>
        <ae:id>16</ae:id>
        <ae:uuid>ef8767f9-755d-46ba-bdd0-b720bfd4b468</ae:uuid>
      </ae:id>
    </ae:member>
  </ae:return>
</ae:GetGroupMembersResponse>

```

ModScriptHolder

Description

The ModScriptHolder type contains the RunModscript response and any errors that were returned. The ModScriptHolder type parameters are listed below.

Parameters

Name	Type	Description
output	ExtendedData [page 162]	Holds response data.
status	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The WorkflowHolder type returns the results of the RunModscript call. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

After the following ModScript has been added to a process app in SBM Composer and it has been deployed, ModScriptHolder is returned.

Sample ModScript:

```

// get input from web service
var param_one = Shell.Params["param_one"].to_string();
var param_two = Shell.Params["param_two"].to_string();

// write a script that does something useful

// write output to web service
Shell.Outputs.push_back(Pair("output_one", "first_output_value: " + param_one));
Shell.Outputs.push_back(Pair("output_two", "second_output_value: " + param_two));

```

RunModscriptResponse:

```

<ae:RunModScriptResponse>
  <ae:return>
    <ae:output>
      <ae:data>
        <ae:name>output_one</ae:name>
        <ae:value>first_output_value: one</ae:value>
      </ae:data>
      <ae:data>
        <ae:name>output_two</ae:name>
        <ae:value>second_output_value: two</ae:value>
      </ae:data>
    </ae:output>
  </ae:return>
</ae:RunModScriptResponse>

```

NoteLoggerInfo

Description

The NoteLoggerInfo type holds the e-mail address for the E-mail Recorder mail box. The NoteLoggerInfo type parameters are listed below.

Parameters

Name	Type	Description
emailAddress	string	This is the e-mail address that is specified in the Mailbox Configuration for the E-mail Recorder.

Usage

The NoteLoggerInfo type holds the e-mail address that is configured for the E-mail Recorder mail box. You use [GetNoteLoggerInfo \[page 63\]](#) to retrieve the data shown here.

XML

The following XML snippet shows the NoteLoggerInfo type in the return element of the GetNoteLoggerInfo response.

```

<ae:GetNoteLoggerInfoResponse>
  <ae:return>
    <ae:emailAddress>test@companyName.com</ae:emailAddress>
  </ae:return>
</ae:GetNoteLoggerInfoResponse>

```

OrderBy

Description

The OrderBy type contains the ORDER BY definition for a report, if ORDER BY is specified for the report. The OrderBy type parameters are listed below.

Parameters

Name	Type	Description
firstFieldName	string	The first field used to order report results.
secondFieldName	string	The second field used to order report results.

Usage

The OrderBy type describes which field or fields are used to order the results returned in a report. OrderBy may have an empty return value even though certain fields are designated in the report definition to sort the results.

XML

The following XML snippet shows the OrderBy type in the reportDefinition element of the RunReport response.

```
<ae:reportDefinition>
  <ae:orderBy/>
```

Point

Description

The Point type holds details about a state in the graphical workflow. The Point type parameters are listed below.

Parameters

Name	Type	Description
x	integer	X-coordinate
y	integer	Y-coordinate
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The Point type is used to define the location of a design object in the graphical workflow. For details on the graphical workflow, refer to [Workflow \[page 248\]](#).

XML

The following XML snippet shows the Point type in the `<ae:center>` element of the GetWorkflows response.

```
<ae:state>
  <ae:id xsi:type="ae:StateIdentifier">
    <ae:displayName>None</ae:displayName>
    <ae:id>0</ae:id>
```

```

    <ae:uuid/>
    <ae:internalName/>
    <ae:isClosed>>false</ae:isClosed>
  </ae:id>
  <ae:center>
    <ae:x>63</ae:x>
    <ae:y>0</ae:y>
  </ae:center>
  <ae:size>
    <ae:width>63</ae:width>
    <ae:height>63</ae:height>
  </ae:size>
  <ae:radius>0</ae:radius>
</ae:state>

```

PrivilegeHolder

Description

The PrivilegeHolder type contains the PrivilegeInfo response and any errors for privileges that were not successfully returned. The PrivilegeHolder type parameters are listed below.

Parameters

Name	Type	Description
privilege	PrivilegeInfo [page 171]	Holds complete information about a privilege.
access	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The PrivilegeHolder type returns detailed information for privileges from the SetGroupPrivileges and SetUserPrivileges calls. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML shows PrivilegeHolder as seen in the <ae:privilege> element in a response.

```

<ae:privilege>
  <ae:privilegeId>
    <ae:name>TS_USRPRJPRIV_DELETE</ae:name>
    <ae:type>TS_PRIVTYPE_USERPRJ</ae:type>
  </ae:privilegeId>
  <ae:access>GRANTED</ae:access>
  <ae:objectId>
    <ae:displayName>IM Project</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>86ea7399-d634-451b-9de9-91bb30d67c1b</ae:uuid>
  </ae:objectId>
</ae:privilege>

```

```
</ae:objectId>  
</ae:privilege>
```

ProjectData

Description

The ProjectData type holds the name and other information about a project in SBM. The ProjectData type parameters are listed below.

Parameters

Name	Type	Description
project	ProjectIdentifier [page 114]	The project that is returned.
description	string	The description of the project. Derived from the TS_DESCRIPTION column in TS_PROJECTS.

Usage

The ProjectData type holds the ID, UUID, name and description used to describe a project. You can use [GetSubmitProjects \[page 68\]](#) to retrieve the project data shown here.

XML

The following XML snippet shows the ProjectData type in the return element of the GetSubmitProjects response.

```
<ae:GetSubmitProjectsResponse>  
  <ae:return>  
    <ae:project xsi:type="ae:ProjectIdentifier">  
      <ae:displayName>IDM Project</ae:displayName>  
      <ae:id>2</ae:id>  
      <ae:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</ae:uuid>  
      <ae:fullyQualifiedName>Base Project||IDM Project</ae:fullyQualifiedName>  
      <ae:internalName>TTT_ISSUES.IDM_PROJECT</ae:internalName>  
    </ae:project>  
    <ae:description/>  
  </ae:return>  
  <ae:return>  
    <ae:project xsi:type="ae:ProjectIdentifier">  
      <ae:displayName>Animation Pro</ae:displayName>  
      <ae:id>6</ae:id>  
      <ae:uuid>2ac5ef27-71da-4b07-ab7e-dddbc9c2d8c7</ae:uuid>  
      <ae:fullyQualifiedName>Base Project||Base IDT Project||  
      Software Development||Animation Pro</ae:fullyQualifiedName>  
      <ae:internalName>TTT_ISSUES.ANIMATION_PRO</ae:internalName>  
    </ae:project>  
    <ae:description/>  
  </ae:return>
```

```

<ae:return>
  <ae:project xsi:type="ae:ProjectIdentifier">
    <ae:displayName>Image Builder</ae:displayName>
    <ae:id>8</ae:id>
    <ae:uuid>d1f727e2-9f70-4bee-afd5-bccaf0e71cda</ae:uuid>
    <ae:fullyQualifiedNames>Base Project||Base IDT Project||
    Software Development||Image Builder</ae:fullyQualifiedNames>
    <ae:internalName>TTT_ISSUES.IMAGE_BUILDER</ae:internalName>
  </ae:project>
  <ae:description/>
</ae:return>
</ae:GetSubmitProjectsResponse>

```

ReportDefinition

Description

The ReportDefinition type contains columns and the order by definition for a report. The ReportDefinition type parameters are listed below.

Parameters

Name	Type	Description
orderBy	OrderBy [page 208]	Indicates which fields are used to organize the report results.
column	Field [page 195]	Holds a description the fields used in the report.

Usage

The ReportDefinition describes the basic structure of a report. The ReportDefinition type contains a description of each of the fields used in the report. If the report uses any of the columns to order the results, the OrderBy parameter will indicate which column(s) are used.

XML

The following XML snippet shows the ReportDefinition type in the return element of the RunReport response.

```

<ae:reportDefinition>
  <ae:orderBy/>
  <ae:column>
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Item Id</ae:displayName>
      <ae:id>53</ae:id>
      <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
      <ae:dbName>ISSUEID</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
  </ae:column>
</ae:reportDefinition>

```

```

</ae:column>
<ae:column>
  <ae:field xsi:type="ae:FieldIdentifier">
    <ae:displayName>Title</ae:displayName>
    <ae:id>54</ae:id>
    <ae:uuid>9bf79ebb-c66f-43dc-b608-5edc0677d4ca</ae:uuid>
    <ae:dbName>TITLE</ae:dbName>
  </ae:field>
  <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
  <ae:attribute>0</ae:attribute>
  <ae:properties>0</ae:properties>
</ae:column>
</ae:reportDefinition>

```

ReportInfo

Description

The ReportInfo type contains a high-level description for a report. The ReportInfo type parameters are listed below.

Parameters

Name	Type	Description
report	ReportIdentifier [page 119]	Holds the identification information for a report.
reportURL	string	This is the URL for the report.
reportType	ReportType [page 120]	An enumeration that indicates the type of report.
reportCategory	ReportCategory [page 118]	A broader enumeration that indicates the category of report (built-in reports, application reports, reports you authored).
reportAccessLevel	ReportAccessLevel [page 116]	An enumeration that indicates the report's access level (PRIVATE, GUEST, USER, or MANAGER).
solution	SolutionIdentifier [page 122]	Holds the identification information for the solution that the report is based on.
table	TableIdentifier [page 126]	Holds the identification information for the table that the report is based on.
project	ProjectIdentifier [page 114]	Holds the identification information for the project that the report was created against.

Name	Type	Description
createdBy	UserIdentifier [page 157]	Holds the identification information for the user who authored the report.
createDate	dateTime	The date the report was created. See Supported Date/Time Formats [page 386] for more information.
modifiedBy	UserIdentifier [page 157]	Holds the identification information for the user that last modified the report.
modifiedDate	dateTime	The date the report was last modified. See Supported Date/Time Formats [page 386] for more information.
execDate	dateTime	The date the report was last executed. See Supported Date/Time Formats [page 386] for more information.
isQueryAtRuntime	boolean	This flag is used to indicate whether or not the report is a query at runtime report. Use the <code>isQueryAtRuntime</code> parameter to determine if the report can be executed using the <code>RunReport</code> call (query at runtime reports cannot be executed by <code>RunReport</code>). If <code>isQueryAtRuntime</code> is true, the report cannot be executed using the <code>RunReport</code> call.

Usage

The `ReportInfo` type holds data used to describe a report. You can use [GetReports \[page 63\]](#) to retrieve the report data shown here.

XML

The following XML snippet shows `ReportInfo` in the `<ae:report>` return element of the `GetReports` response.

```
<ae:report>
  <ae:report xsi:type="ae:ReportIdentifier">
    <ae:displayName>My Test Report</ae:displayName>
    <ae:id>117</ae:id>
    <ae:uuid>fa736261-ef83-483f-b13c-1f1c4176a8ea</ae:uuid>
  </ae:report>
  <ae:reportURL>tmtrack.dll?ReportPage&Template=reports%
  →2Flistframe&ReportId=117</ae:reportURL>
  <ae:reportType>LISTING</ae:reportType>
  <ae:reportCategory>USERREPORTS</ae:reportCategory>
  <ae:reportAccessLevel>GUEST</ae:reportAccessLevel>
  <ae:project xsi:type="ae:ProjectIdentifier">
    <ae:displayName>Animation Pro</ae:displayName>
```

```

    <ae:id>0</ae:id>
    <ae:uuid>2ac5ef27-71da-4b07-ab7e-dddbc9c2d8c7</ae:uuid>
    <ae:fullyQualifiedName>Base Project||Base IDT Project||
    Software Development||Animation Pro<ae:fullyQualifiedName>
    <ae:internalName>TTT_ISSUES.ANIMATION_PRO</ae:internalName>
</ae:project>
<ae:createdBy xsi:type="ae:UserIdentifier">
    <ae:displayName>Administrator</ae:displayName>
    <ae:id>8</ae:id>
    <ae:uuid>9f9146a3-a273-4411-8000-8396688b7554</ae:uuid>
    <ae:loginId>admin</ae:loginId>
</ae:createdBy>
<ae:createDate>1969-12-31T23:59:58Z</ae:createDate>
<ae:modifiedBy xsi:type="ae:UserIdentifier">
    <ae:displayName/>
    <ae:id>0</ae:id>
    <ae:uuid/>
    <ae:loginId/>
</ae:modifiedBy>
<ae:modifiedDate>1969-12-31T23:59:58Z</ae:modifiedDate>
<ae:execDate>1969-12-31T23:59:58Z</ae:execDate>
<ae:isQueryAtRuntime>false</ae:isQueryAtRuntime>
</ae:report>

```

ReportResult

Description

The ReportResult type contains the actual item data returned in a report. The ReportResult type parameters are listed below.

Parameters

Name	Type	Description
itemURL	string	This is the URL for the item returned in the report results.
item	ItemIdentifier [page 108]	The item described in the report.
fieldValue	FieldWithValue [page 201]	Holds the field type and field value for each field returned in the report results.

Usage

The ReportResult is sent back in response to [RunReport \[page 80\]](#). ReportResult contains the URL for each item returned by the report. You can pre-pend `http://serverName/tmtrack/` to the itemURL contents and access the item from the SBM User Workspace. For every column defined in the report, the field type and field value are returned as well in the fieldValue element.

XML

The following XML snippet shows ReportResult in the return element of the RunReport response.

```
<ae:result>
  <ae:itemURL>tmtrack.dll?IssuePage&amp;RecordId=40&amp;
  →Template=view&amp;TableId=1000</ae:itemURL>
  <ae:item xsi:type="ae:ItemIdentifier">
    <ae:displayName>BUG000077</ae:displayName>
    <ae:id>40</ae:id>
    <ae:uuid>2841fdfb-9db3-43bb-a2e1-3bd54b64dbac</ae:uuid>
    <ae:tableId>1000</ae:tableId>
    <ae:tableIdItemId>1000:40</ae:tableIdItemId>
    <ae:issueId>000077</ae:issueId>
  </ae:item>
  <ae:fieldValue xsi:type="ae:FieldWithValue">
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Item Id</ae:displayName>
      <ae:id>53</ae:id>
      <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
      <ae:dbName>ISSUEID</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
    <ae:value>
      <ae:displayValue>BUG000077</ae:displayValue>
      <ae:internalValue>000077</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:fieldValue>
  <ae:fieldValue xsi:type="ae:FieldWithValue">
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Title</ae:displayName>
      <ae:id>54</ae:id>
      <ae:uuid>9bf79ebb-c66f-43dc-b608-5edc0677d4ca</ae:uuid>
      <ae:dbName>TITLE</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
    <ae:value>
      <ae:displayValue>Scanner feature is not working correctly</ae:displayValue>
      <ae:internalValue>Scanner feature is not working correctly</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:fieldValue>
</ae:result>
```

RoleHolder

Description

The RoleHolder type contains the RoleInfo response and any errors for roles that were not successfully returned. The RoleHolder type parameters are listed below.

Parameters

Name	Type	Description
role	RoleInfo [page 178]	Holds complete information about a role.
access	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The RoleHolder type returns detailed information for roles from the GetUserRoles, GetGroupRoles, SetGroupRoles, and SetUserRoles calls. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML shows RoleHolder as seen in the `<ae:role>` element in a response.

```
<ae:role>
  <ae:id xsi:type="ae:RoleIdentifier">
    <ae:displayName>IDM Team</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>a59d7c1d-1f5e-4f0f-b906-41eb234721ae</ae:uuid>
    <ae:projectId xsi:type="ae:ProjectIdentifier">
      <ae:displayName>IDM Project</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</ae:uuid>
    </ae:projectId>
  </ae:id>
  <ae:access>GRANTED</ae:access>
  <ae:extendedData>
    <ae:data>
      <ae:name>inheritedFrom</ae:name>
      <ae:value>IDM View Only (Group)</ae:value>
    </ae:data>
  </ae:extendedData>
</ae:role>
```

RunReportResult

Description

The RunReportResult type contains the results or output of a report. The RunReportResult type parameters are listed below.

Parameters

Name	Type	Description
queryRange	QueryRange [page 115]	The QueryRange type specifies the number of reports returned.
reportInfo	ReportInfo [page 213]	Holds a description of the report.
reportDefinition	ReportDefinition [page 212]	Holds the columns in a report and indicates which columns are used to order the results.
result	ReportResult [page 215]	Holds the actual data in the columns.

Usage

The RunReportResult is sent back in response to [RunReport](#) [page 80]. The RunReportResult type contains the actual data you would see in response to manually executing a report.

XML

The following XML snippet shows the ReportInfo, ReportDefintion, and ReportResult in the return element of the RunReport response.

```
<ae:RunReportResponse>
  <ae:return>
    <ae:queryRange>
      <ae:startIndex>2</ae:startIndex>
      <ae:fetchSize>4</ae:fetchSize>
      <ae:totalCount>47</ae:totalCount>
    </ae:queryRange>
    <ae:reportInfo>
      <ae:report xsi:type="ae:ReportIdentifier">
        <ae:displayName>My Test Report</ae:displayName>
        <ae:id>117</ae:id>
        <ae:uuid>fa736261-ef83-483f-b13c-1f1c4176a8ea</ae:uuid>
      </ae:report>
      <ae:reportURL>tmtrack.dll?ReportPage&Template=reports%2
      →Flistframe&ReportId=117</ae:reportURL>
      <ae:reportType>LISTING</ae:reportType>
      <ae:reportCategory>USERREPORTS</ae:reportCategory>
      <ae:reportAccessLevel>GUEST</ae:reportAccessLevel>
      <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Issue Defect Management</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
        <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
        <ae:tabName>IDM</ae:tabName>
      </ae:solution>
      <ae:table xsi:type="ae:TableIdentifier">
```

```

    <ae:displayName>Issues</ae:displayName>
    <ae:id>1000</ae:id>
    <ae:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</ae:uuid>
    <ae:dbName>UBG_ISSUES</ae:dbName>
</ae:table>
<ae:project xsi:type="ae:ProjectIdentifier">
    <ae:displayName>Animation Pro</ae:displayName>
    <ae:id>6</ae:id>
    <ae:uuid>2ac5ef27-71da-4b07-ab7e-dddbc9c2d8c7</ae:uuid>
    <ae:fullyQualifiedName>Base Project||Base IDT Project||
    Software Development||Animation Pro</ae:fullyQualifiedName>
    <ae:internalName>TTT_ISSUES.ANIMATION_PRO</ae:internalName>
</ae:project>
<ae:createdBy xsi:type="ae:UserIdentifier">
    <ae:displayName>Administrator</ae:displayName>
    <ae:id>8</ae:id>
    <ae:uuid>9f9146a3-a273-4411-8000-8396688b7554</ae:uuid>
    <ae:loginId>admin</ae:loginId>
</ae:createdBy>
<ae:createDate>2010-09-29T16:10:10Z</ae:createDate>
<ae:modifiedBy xsi:type="ae:UserIdentifier">
    <ae:displayName/>
    <ae:id>0</ae:id>
    <ae:uuid/>
    <ae:loginId/>
</ae:modifiedBy>
<ae:modifiedDate>1969-12-31T23:59:58Z</ae:modifiedDate>
<ae:execDate>2010-09-29T16:10:14Z</ae:execDate>
<ae:isQueryAtRuntime>false</ae:isQueryAtRuntime>
</ae:reportInfo>
<ae:reportDefinition>
    <ae:orderBy/>
    <ae:column>
        <ae:field xsi:type="ae:FieldIdentifier">
            <ae:displayName>Item Id</ae:displayName>
            <ae:id>53</ae:id>
            <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
            <ae:dbName>ISSUEID</ae:dbName>
        </ae:field>
        <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
        <ae:attribute>0</ae:attribute>
        <ae:properties>0</ae:properties>
    </ae:column>
    <ae:column>
        <ae:field xsi:type="ae:FieldIdentifier">
            <ae:displayName>Title</ae:displayName>
            <ae:id>54</ae:id>
            <ae:uuid>9bf79ebb-c66f-43dc-b608-5edc0677d4ca</ae:uuid>
            <ae:dbName>TITLE</ae:dbName>
        </ae:field>
        <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
        <ae:attribute>0</ae:attribute>
        <ae:properties>0</ae:properties>
    </ae:column>
</ae:reportDefinition>

```

```
<ae:result>
  <ae:itemURL>tmtrack.dll?IssuePage&amp;RecordId=40&amp;
  →Template=view&amp;TableId=1000</ae:itemURL>
  <ae:item xsi:type="ae:ItemIdentifier">
    <ae:displayName>BUG000077</ae:displayName>
    <ae:id>40</ae:id>
    <ae:uuid>2841fdfb-9db3-43bb-a2e1-3bd54b64dbac</ae:uuid>
    <ae:tableId>1000</ae:tableId>
    <ae:tableIdItemId>1000:40</ae:tableIdItemId>
    <ae:issueId>000077</ae:issueId>
  </ae:item>
  <ae:fieldValue xsi:type="ae:FieldWithValue">
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Item Id</ae:displayName>
      <ae:id>53</ae:id>
      <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
      <ae:dbName>ISSUEID</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
    <ae:value>
      <ae:displayValue>BUG000077</ae:displayValue>
      <ae:internalValue>000077</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:fieldValue>
  <ae:fieldValue xsi:type="ae:FieldWithValue">
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Title</ae:displayName>
      <ae:id>54</ae:id>
      <ae:uuid>9bf79ebb-c66f-43dc-b608-5edc0677d4ca</ae:uuid>
      <ae:dbName>TITLE</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
    <ae:value>
      <ae:displayValue>Scanner feature is not working correctly</ae:displayValue>
      <ae:internalValue>Scanner feature is not working correctly</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:fieldValue>
</ae:result>
<ae:result>
  <ae:itemURL>tmtrack.dll?IssuePage&amp;RecordId=41&amp;
  →Template=view&amp;TableId=1000</ae:itemURL>
  <ae:item xsi:type="ae:ItemIdentifier">
    <ae:displayName>BUG000078</ae:displayName>
    <ae:id>41</ae:id>
    <ae:uuid>24a726fb-3a43-44a2-aa94-9794ad9063d4</ae:uuid>
    <ae:tableId>1000</ae:tableId>
    <ae:tableIdItemId>1000:41</ae:tableIdItemId>
    <ae:issueId>000078</ae:issueId>
```

```

</ae:item>
<ae:fieldValue xsi:type="ae:FieldWithValue">
  <ae:field xsi:type="ae:FieldIdentifier">
    <ae:displayName>Item Id</ae:displayName>
    <ae:id>53</ae:id>
    <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
    <ae:dbName>ISSUEID</ae:dbName>
  </ae:field>
  <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
  <ae:attribute>0</ae:attribute>
  <ae:properties>0</ae:properties>
  <ae:value>
    <ae:displayValue>BUG000078</ae:displayValue>
    <ae:internalValue>000078</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:fieldValue>
<ae:fieldValue xsi:type="ae:FieldWithValue">
  <ae:field xsi:type="ae:FieldIdentifier">
    <ae:displayName>Title</ae:displayName>
    <ae:id>54</ae:id>
    <ae:uuid>9bf79ebb-c66f-43dc-b608-5edc0677d4ca</ae:uuid>
    <ae:dbName>TITLE</ae:dbName>
  </ae:field>
  <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
  <ae:attribute>0</ae:attribute>
  <ae:properties>0</ae:properties>
  <ae:value>
    <ae:displayValue>WebSite Links</ae:displayValue>
    <ae:internalValue>WebSite Links</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:fieldValue>
</ae:result>
<ae:result>
  <ae:itemURL>tmtrack.dll?IssuePage&amp;RecordId=42&amp;
  →Template=view&amp;TableId=1000</ae:itemURL>
  <ae:item xsi:type="ae:ItemIdentifier">
    <ae:displayName>ENH000079</ae:displayName>
    <ae:id>42</ae:id>
    <ae:uuid>d67f64c6-59a0-4db7-b195-abbb7434a4b5</ae:uuid>
    <ae:tableId>1000</ae:tableId>
    <ae:tableIdItemId>1000:42</ae:tableIdItemId>
    <ae:issueId>000079</ae:issueId>
  </ae:item>
  <ae:fieldValue xsi:type="ae:FieldWithValue">
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Item Id</ae:displayName>
      <ae:id>53</ae:id>
      <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
      <ae:dbName>ISSUEID</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>

```

```
<ae:value>
  <ae:displayValue>ENH000079</ae:displayValue>
  <ae:internalValue>000079</ae:internalValue>
  <ae:uuid/>
</ae:value>
</ae:fieldValue>
<ae:fieldValue xsi:type="ae:FieldWithValue">
  <ae:field xsi:type="ae:FieldIdentifier">
    <ae:displayName>Title</ae:displayName>
    <ae:id>54</ae:id>
    <ae:uuid>9bf79ebb-c66f-43dc-b608-5edc0677d4ca</ae:uuid>
    <ae:dbName>TITLE</ae:dbName>
  </ae:field>
  <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
  <ae:attribute>0</ae:attribute>
  <ae:properties>0</ae:properties>
  <ae:value>
    <ae:displayValue>Zoom tool needs more options</ae:displayValue>
    <ae:internalValue>Zoom tool needs more options</ae:internalValue>
    <ae:uuid/>
  </ae:value>
</ae:fieldValue>
</ae:result>
<ae:result>
  <ae:itemURL>tmtrack.dll?IssuePage&amp;RecordId=43&amp;
  →Template=view&amp;TableId=1000</ae:itemURL>
  <ae:item xsi:type="ae:ItemIdentifier">
    <ae:displayName>BUG000080</ae:displayName>
    <ae:id>43</ae:id>
    <ae:uuid>1d83e8dc-e0e4-495f-b858-8e7673abca47</ae:uuid>
    <ae:tableId>1000</ae:tableId>
    <ae:tableIdItemId>1000:43</ae:tableIdItemId>
    <ae:issueId>000080</ae:issueId>
  </ae:item>
  <ae:fieldValue xsi:type="ae:FieldWithValue">
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Item Id</ae:displayName>
      <ae:id>53</ae:id>
      <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
      <ae:dbName>ISSUEID</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
    <ae:value>
      <ae:displayValue>BUG000080</ae:displayValue>
      <ae:internalValue>000080</ae:internalValue>
      <ae:uuid/>
    </ae:value>
  </ae:fieldValue>
  <ae:fieldValue xsi:type="ae:FieldWithValue">
    <ae:field xsi:type="ae:FieldIdentifier">
      <ae:displayName>Title</ae:displayName>
      <ae:id>54</ae:id>
      <ae:uuid>9bf79ebb-c66f-43dc-b608-5edc0677d4ca</ae:uuid>
```

```

        <ae:dbName>TITLE</ae:dbName>
    </ae:field>
    <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
    <ae:attribute>0</ae:attribute>
    <ae:properties>0</ae:properties>
    <ae:value>
        <ae:displayValue>Setup is not installing examples</ae:displayValue>
        <ae:internalValue>Setup is not installing examples</ae:internalValue>
        <ae:uuid/>
    </ae:value>
</ae:fieldValue>
</ae:result>
</ae:return>
</ae:RunReportResponse>

```

RunReportXmlResult

Description

The RunReportXmlResult type contains the results or output of a report in XML format. The RunReportXmlResult type parameters are listed below.

Parameters

Name	Type	Description
result	string	The result contains the report results in XML.

Usage

The RunReportXmlResult is sent back in response to [RunReportXml \[page 82\]](#). The RunReportXmlResult type contains the actual data you would see in response to manually executing a report.

XML

The following XML snippet shows the RunReportXml response.

```

<ae:result><![CDATA[<?xml version="1.0" encoding="UTF-8"?>
<session><request LocalDateTime="2012-06-14T14:18:49"><url></url>
<title>Assigned Issues Needing Time Estimates</title>
<subtitle></subtitle>
<desc>Now showing Issues 1 - 2 of 2</desc>
<displayHeader></displayHeader>
<displayFooter></displayFooter>
<displaySearchFilter></displaySearchFilter>
<ReportLinks linkbase=""><Edit fullUrl="tmtrack.dll?ReportModifyForm&amp;ReportId=87
-&amp;Action=Access+Report" htmlid="" img="edit_rpttitlebar.gif" target="Home">
-&Edit report</Edit>
<Print htmlid="printable" img="icon_print.png" partialUrl="&amp;template=printlst"
-&target="printable">Printable View</Print>
<Excel htmlid="ExportToExcel" img="icon_excel.png" partialUrl="&amp;template=xml/
-&report&amp;returncontenttype=application%2fvnd.ms-excel&amp;stylesheet=xsl/

```

```

→Excel.xsl&amp;nodetails=1&amp;recno=-1" target="ExportToExcel">Export to Excel</Excel>
<Email fullUrl="javascript:if(r&amp;&amp;r.eMailReport)r.eMailReport('U',87)"
→htmlid="eMailReport" img="email.gif">E-mail Report</Email>
<Copy fullUrl="javascript:copyToClipboard()" htmlid="copyurlicon" img="tree_paste.gif"
→>Copy URL to Clipboard</Copy>
</ReportLinks>
</request>

<result project="Base Project||IDM Project||Animation Pro" table="1000" type="IL">
→<headers><header fieldid="htm" uuid="">HTML</header>
<header fieldid="f53" uuid="8a46043d-8cff-4871-a106-f0646ed3c58f">Item Id</header>
<header fieldid="f54" uuid="9bf79ebb-c66f-43dc-b608-5edc0677d4ca">Title</header>
<header fieldid="f61" uuid="7077c520-cf68-45fc-97aa-3721687ec7cf">Time to Fix</header>
<header fieldid="f86" uuid="91548936-7979-49eb-9a03-1cb4545361d4">Owner</header>
</headers>
<rows>

<row displayid="ENH000079" record="42"><column fieldid="htm" uuid=""
→value="tmtrack.dll?IssuePage&amp;RecordId=42&amp;Template=view&amp;TableId=1000"/>
<column fieldid="f53" fieldtype="101" uuid="<omitted>">ENH000079</column>
<column fieldid="f54" fieldtype="101" uuid="<omitted>">Zoom issues</column>
<column Number="0.00" fieldid="f61" fieldtype="100" uuid="<omitted>">0.00Hours</column>
<column fieldid="f86" fieldtype="107" uuid="<omitted>">Newton Engineer</column>
</row>
<row displayid="BUG000085" record="48"><column fieldid="htm" uuid=""
→value="tmtrack.dll?IssuePage&amp;RecordId=48&amp;Template=view&amp;TableId=1000"/>
<column fieldid="f53" fieldtype="101" uuid="<omitted>">BUG000085</column>
<column fieldid="f54" fieldtype="101" uuid="<omitted>">Animation broken</column>
<column Number="0.00" fieldid="f61" fieldtype="100" uuid="<omitted>">0.00Hours</column>
<column fieldid="f86" fieldtype="107" uuid="<omitted>">Laura Engineer</column>
</row>

```

SelectionOption

Description

The SelectionOption type contains a generic identifier and order information for a field selection. The SelectionOption type parameters are listed below.

Parameters

Name	Type	Description
id	Extension. See Identifier [page 107] .	Generic identification extension base. Holds the displayName, id, and uuid for a field selection.
orderIndex	integer	Indicates the order of the selection.

Usage

The SelectionOption type returns generic identification information for a field selection, and the order for values in a *Single Selection* or *Multi-Selection* field.

XML

The following XML shows SelectionOption as seen in GetFieldSelectionsResponse.

```
<ae:return>
  <ae:field xsi:type="ae:FieldIdentifier">
    <ae:displayName>Functional Areas</ae:displayName>
    <ae:id>188</ae:id>
    <ae:uuid>c2e67944-af40-4153-be79-3cce0fd8e17c</ae:uuid>
    <ae:dbName>FUNCTIONAL_AREAS</ae:dbName>
  </ae:field>
  <ae:type>MULTI-SELECTION</ae:type>
  <ae:option>
    <ae:id>
      <ae:displayName>Administrator Tool</ae:displayName>
      <ae:id>65</ae:id>
      <ae:uuid>46da9a27-12eb-428f-bbfd-830540973269</ae:uuid>
    </ae:id>
    <ae:orderIndex>0</ae:orderIndex>
  </ae:option>
  <ae:option>
    <ae:id>
      <ae:displayName>End User Interface</ae:displayName>
      <ae:id>66</ae:id>
      <ae:uuid>3514834d-e105-47fa-ba85-3b2fa847e120</ae:uuid>
    </ae:id>
    <ae:orderIndex>1</ae:orderIndex>
  </ae:option>
  <ae:option>
    <ae:id>
      <ae:displayName>Installer</ae:displayName>
      <ae:id>67</ae:id>
      <ae:uuid>3988a7d9-277e-473f-8b15-9b9842ab01b7</ae:uuid>
    </ae:id>
    <ae:orderIndex>2</ae:orderIndex>
  </ae:option>
</ae:return>
```

Size

Description

The Size type holds size information about for objects in the graphical workflow. The Size type parameters are listed below.

Parameters

Name	Type	Description
width	integer	The width of the object.
height	integer	The height of the object.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The Size type is used to define the size of a design object in the graphical workflow. For details on the graphical workflow, refer to [Workflow \[page 248\]](#).

XML

The following XML snippet shows the Size type in the `<ae:size>` element of the GetWorkflows response.

```
<ae:state>
  <ae:id xsi:type="ae:StateIdentifier">
    <ae:displayName>None</ae:displayName>
    <ae:id>0</ae:id>
    <ae:uuid/>
    <ae:internalName/>
    <ae:isClosed>>false</ae:isClosed>
  </ae:id>
  <ae:center>
    <ae:x>63</ae:x>
    <ae:y>0</ae:y>
  </ae:center>
  <ae:size>
    <ae:width>63</ae:width>
    <ae:height>63</ae:height>
  </ae:size>
  <ae:radius>0</ae:radius>
</ae:state>
```

SolutionData

Description

The SolutionData type holds the name and other information about an solution in SBM. The SolutionData type parameters are listed below.

Parameters

Name	Type	Description
solution	SolutionIdentifier [page 122]	Holds the identification information for a solution.
type	SolutionIdentifier [page 122]	The type of solution. The possible values are: TEAMTRACK_SOLUTION, USER_SOLUTION, and THIRD_PARTYSOLUTION.
prefix	string	The prefix of the solution. Derived from the TS_PREFIX column in TS_SOLUTIONS.
description	string	The description of the solution. Derived from the TS_DESCRIPTION column in TS_SOLUTIONS.

Name	Type	Description
processAppUUID	string	The UUID of the associated process app.

Usage

The SolutionData type holds the SolutionIdentifier and additional information used to completely describe a solution. You can use [GetSolutions \[page 66\]](#) to retrieve the solution data shown here.

XML

The following XML snippet shows the SolutionData type in the return element of the GetSolutions response.

```
<ae:GetSolutionsResponse>
  <ae:return>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Issue Defect Management</ae:displayName>
      <ae:id>1</ae:id>
      <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
      <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
      <ae:tabName>IDM</ae:tabName>
    </ae:solution>
    <ae:type>USER-SOLUTION</ae:type>
    <ae:prefix>UBG</ae:prefix>
    <ae:description>Last updated 1/26/09</ae:description>
    <ae:processAppUUID>d365ac15-6b52-47a5-b82c-259e4591d022</ae:processAppUUID>
  </ae:return>
  <ae:return>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Incident Management</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
      <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
      <ae:tabName>Incident Mgmt</ae:tabName>
    </ae:solution>
    <ae:type>USER-SOLUTION</ae:type>
    <ae:prefix>UIM</ae:prefix>
    <ae:description/>
    <ae:processAppUUID>955e8e0e-9342-46ed-ba06-d1bfdc1cdf80</ae:processAppUUID>
  </ae:return>
  <ae:return>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Change Request Management</ae:displayName>
      <ae:id>3</ae:id>
      <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
      <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
      <ae:tabName>Change Requests</ae:tabName>
    </ae:solution>
    <ae:type>USER-SOLUTION</ae:type>
    <ae:prefix>UCA</ae:prefix>
    <ae:description/>
    <ae:processAppUUID>660af90a-7d96-405c-a859-7115a9114ed3</ae:processAppUUID>
```

```
</ae:return>
</ae:GetSolutionsResponse>
```

StateChangeHistory

Description

The StateChangeHistory type holds the state change history for an item. The StateChangeHistory type parameters are listed below.

Parameters

Name	Type	Description
newState	StateIdentifier [page 124]	The state the item is in after the transition.
transition	TransitionIdentifier [page 128]	The transition that was performed.
time	dateTime	The timestamp used when the change record was created.
user	UserIdentifier [page 157]	The user who performed the transition.
owner	UserIdentifier [page 157]	The current owner of the item.

Usage

The StateChangeHistory type is part of the response to the GetStateChangeHistory call. StateChangeHistory holds the same information that you see in the details of the State Change History for an item. You can use [GetStateChangeHistory \[page 67\]](#) to retrieve the data shown here.

XML

The following XML snippet shows the StateChangeHistory type in the return element of the GetStateChangeHistory response.

```
<ae:stateChangeHistory>
  <ae:newState xsi:type="ae:StateIdentifier">
    <ae:displayName>Evaluating Issue</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</ae:internalName>
    <ae:isClosed>>false</ae:isClosed>
  </ae:newState>
  <ae:transition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Submit</ae:displayName>
    <ae:id>3</ae:id>
```

```

    <ae:uuid>a78f0a30-1305-46c2-b661-df8219c105b2</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.SUBMIT</ae:internalName>
  </ae:transition>
  <ae:time>2009-02-05T22:04:32Z</ae:time>
  <ae:user xsi:type="ae:UserIdentifier">
    <ae:displayName>Joe Manager</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeea777f</ae:uuid>
    <ae:loginId>joe</ae:loginId>
  </ae:user>
  <ae:owner xsi:type="ae:UserIdentifier">
    <ae:displayName>Joe Manager</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeea777f</ae:uuid>
    <ae:loginId>joe</ae:loginId>
  </ae:owner>
</ae:stateChangeHistory>

```

Status

Description

The Status type holds status information for a Web service operation. The Status type parameters are listed below.

Parameters

Name	Type	Description
status	StatusEnum [page 230] .	Status enumeration that indicates whether the message is a warning message, informational message, or error message.
code	string	The message code that is returned.
message	string	The message string that is returned.

Usage

The Status type is used to return status messages from service operations.

XML

The following XML shows Status as seen in the return element of a GetItems call that did not send the proper ItemIdentifier content.

```

<ae:return>
  <ae:status>
    <ae:status>IS-ERROR</ae:status>
    <ae:message>Invalid item id 0 for table 1000.</ae:message>
  </ae:status>
</ae:return>

```

StatusEnum

Description

StatusEnum indicates the type of message that is returned in the Status response.

Parameters

Name	Type	Description
IS-WARNING	string	Indicates a warning message.
IS-INFORMATION	string	Indicates an informational message.
IS-ERROR	string	Indicates an error message.

Usage

None.

XML

The following XML shows StatusEnum in the <ae:status> return element of a typical response.

```
<ae:return>
  <ae:status>
    <ae:status>IS-ERROR</ae:status>
    <ae:message>Invalid project 0.</ae:message>
  </ae:status>
</ae:return>
```

TableData

Description

The TableData type holds the name and other information about a table in SBM. The TableData type parameters are listed below.

Parameters

Name	Type	Description
table	TableIdentifier [page 126]	Holds the identification information for a table.
solution	SolutionIdentifier [page 122]	Holds the identification information for a solution.
type	Table-Type [page 127]	The type of table returned.

Name	Type	Description
description	string	The description of the table. Derived from the TS_DESCRIPTION column in TS_TABLES.
field	Field [page 195]	Fields that are defined for the table.

Usage

The TableData type holds the TableIdentifier and additional information used to completely describe a table. You can use [GetTables \[page 69\]](#) to retrieve the table data shown here.

XML

The following XML snippet shows the TableData type in the return element of the GetTables response.

```
<ae:GetTablesResponse>
  <ae:return>
    <ae:table xsi:type="ae:TableIdentifier">
      <ae:displayName>Issues</ae:displayName>
      <ae:id>1000</ae:id>
      <ae:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</ae:uuid>
      <ae:dbName>UBG_ISSUES</ae:dbName>
    </ae:table>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Issue Defect Management</ae:displayName>
      <ae:id>1</ae:id>
      <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
      <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
      <ae:tabName>IDM</ae:tabName>
    </ae:solution>
    <ae:type>PRIMARY-TABLE</ae:type>
    <ae:description/>
    <ae:field>
      <ae:field xsi:type="ae:FieldIdentifier">
        <ae:displayName>Type</ae:displayName>
        <ae:id>52</ae:id>
        <ae:uuid>7718fd10-ff7a-4fc9-9f8e-581820cb77bf</ae:uuid>
        <ae:dbName>ISSUETYPE</ae:dbName>
      </ae:field>
      <ae:fieldType>FLDTYPE-SELECTION</ae:fieldType>
      <ae:attribute>0</ae:attribute>
      <ae:properties>0</ae:properties>
    </ae:field>
    <ae:field>
      <ae:field xsi:type="ae:FieldIdentifier">
        <ae:displayName>Item Id</ae:displayName>
        <ae:id>53</ae:id>
        <ae:uuid>8a46043d-8cff-4871-a106-f0646ed3c58f</ae:uuid>
        <ae:dbName>ISSUEID</ae:dbName>
      </ae:field>
      <ae:fieldType>FLDTYPE-TEXT</ae:fieldType>
```

```
<ae:attribute>0</ae:attribute>
  <ae:properties>0</ae:properties>
</ae:field>
</ae:GetTablesResponse>
```

TimePreference

Description

TimePreference indicates a user's preferred time format. The available options are listed below.

Parameters

Name	Type	Description
TIME-FORMAT-12HOUR	string	Indicates a 12-hour clock preference.
TIME-FORMAT-24HOUR	string	Indicates a 24-hour clock preference.
TIME-FORMAT-USE-GMT-OFFSET	string	Indicates the use of a GMT offset. (No longer used).
TIME-FORMAT-HONOR-DAYLIGHT	string	Indicates time format with daylight savings honored. (No longer used).
TIME-FORMAT-LEAVE-UNCHANGED	string	Do not change the current time format. Sent by default if not specified.

Usage

TimePreference is used to determine how time is displayed to users. The various time formats are returned in the timePreference parameter of the GetUsers response. See the [UserInfo \[page 242\]](#) response for more information.

XML

The following XML shows TimePreference as seen in the return element of a GetUsers response.

```
<ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
```

Transition

Description

The Transition type holds the name and other information about a transition in SBM. The Transition type parameters are listed below.

Parameters

Name	Type	Description
transition	TransitionIdentifier [page 128]	Holds identification information for a transition.
fromState	StateIdentifier [page 124]	The state from which the transition begins.
toState	StateIdentifier [page 124]	The state to which the transition moves or ends.
type	Transition-Type [page 130]	The type of transition.
project	ProjectIdentifier [page 114]	For a TRANSITION_POST type of transition, this indicates the project into which the item is to be submitted.
transitionAttributes	string	The list of transition attributes associated with this transition.

Usage

The Transition type completely describes an available transition or transitions on an item in SBM. Use [GetAvailableTransitions](#) [page 50] to retrieve a list of transitions available for a specified item.

The transitionAttributes argument is optional and is only used as another means to describe the transition. A transition attribute is typically associated with unique enabler license - integration transitions.

XML

The following XML snippet shows the Transition type in the return element of the [GetAvailableTransitions](#) response.

```
<ae:GetAvailableTransitionsResponse>
  <ae:return>
    <ae:transition xsi:type="ae:TransitionIdentifier">
      <ae:displayName>Post Issue</ae:displayName>
      <ae:id>8</ae:id>
      <ae:uuid>7d095afe-1679-4e68-b492-0ad574bcdb2b</ae:uuid>
      <ae:internalName>SOFTWARE_ISSUES.POST_ISSUE</ae:internalName>
    </ae:transition>
    <ae:fromState xsi:type="ae:StateIdentifier">
      <ae:displayName>Evaluating Issue</ae:displayName>
      <ae:id>1</ae:id>
      <ae:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</ae:uuid>
      <ae:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</ae:internalName>
      <ae:isClosed>>false</ae:isClosed>
    </ae:fromState>
  </ae:return>
</ae:GetAvailableTransitionsResponse>
```

```

<ae:toState xsi:type="ae:StateIdentifier">
  <ae:displayName>Fixing Issue</ae:displayName>
  <ae:id>4</ae:id>
  <ae:uuid>a555a40c-7554-46f2-80bb-a6ff8b9ec917</ae:uuid>
  <ae:internalName>SOFTWARE_ISSUES.FIXING_ISSUE</ae:internalName>
  <ae:isClosed>>false</ae:isClosed>
</ae:toState>
<ae:type>TRANSITION-POST</ae:type>
<ae:project xsi:type="ae:ProjectIdentifier">
  <ae:displayName>Animation Pro</ae:displayName>
  <ae:id>6</ae:id>
  <ae:uuid>2ac5ef27-71da-4b07-ab7e-dddbc9c2d8c7</ae:uuid>
  <ae:fullyQualifiedName>Base Project||Base IDT Project||
  Software Development||Animation Pro</ae:fullyQualifiedName>
  <ae:internalName>TTT_ISSUES.ANIMATION_PRO</ae:internalName>
</ae:project>
</ae:return>
</ae:GetAvailableTransitionsResponse>

```

TTItemHolder

Description

The TTItemHolder type contains the TTItem response and any returned errors for items that were not successfully created or updated. The TTItemHolder type parameters are listed below.

Parameters

Name	Type	Description
item	TTItem [page 133]	The <i>TTItem</i> type holds the generic data for an item.
status	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The TTItemHolder type holds all of the field information for an item along with attached notes and item links. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML snippet shows TTItemHolder in the `<ae:item>` return element of the GetItems response. Note that an error message is returned in this example (inside the `message` element). In this example, three items were requested using the GetItems call; however, the second item was not given an internal ID. Therefore, an error was returned for the second item, though the service continued to run and returned the third item (BUG000173).

```
<ae:item>
  <ae:id xsi:type="ae:ItemIdentifier">
    <ae:displayName>BUG000164</ae:displayName>
    <ae:id>106</ae:id>
    <ae:uuid>7fe3e1f4-c8a8-4a99-8aec-fd236699a516</ae:uuid>
    <ae:tableId>1000</ae:tableId>
    <ae:tableIdItemId>1000:106</ae:tableIdItemId>
    <ae:issueId>000164</ae:issueId>
  </ae:id>
  <ae:itemType>Bug Report</ae:itemType>
  <ae:project xsi:type="ae:ProjectIdentifier">
    <ae:displayName>IDM Project</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</ae:uuid>
    <ae:fullyQualifiedNames>Base Project||IDM Project</ae:fullyQualifiedNames>
    <ae:internalName>TTT_ISSUES.IDM_PROJECT</ae:internalName>
  </ae:project>
  <ae:title>I'm getting a 502 error</ae:title>
  <ae:description>When I access the HR system, I'm getting a 502 error.
</ae:description>
  <ae:createdBy xsi:type="ae:UserIdentifier">
    <ae:displayName>Jan Lvl 2 Support</ae:displayName>
    <ae:id>18</ae:id>
    <ae:uuid>09c6aa7e-e2b9-4ff4-9377-0d4090cab4fe</ae:uuid>
    <ae:loginId>jan</ae:loginId>
  </ae:createdBy>
  <ae:createDate>2009-02-18T18:18:11Z</ae:createDate>
  <ae:modifiedBy xsi:type="ae:UserIdentifier">
    <ae:displayName>Rhadika Tester</ae:displayName>
    <ae:id>28</ae:id>
    <ae:uuid>43a37118-c82a-4fbd-803f-alf0ad127c12</ae:uuid>
    <ae:loginId>rhadika</ae:loginId>
  </ae:modifiedBy>
  <ae:modifiedDate>2009-02-18T18:22:53Z</ae:modifiedDate>
  <ae:activeInactive>>false</ae:activeInactive>
  <ae:state xsi:type="ae:StateIdentifier">
    <ae:displayName>Resolved</ae:displayName>
    <ae:id>7</ae:id>
    <ae:uuid>ea57582f-5c62-4bcd-b250-5e21cad308e3</ae:uuid>
    <ae:internalName>SOFTWARE_ISSUES.RESOLVED</ae:internalName>
    <ae:isClosed>>true</ae:isClosed>
  </ae:state>
  <ae:owner xsi:type="ae:UserIdentifier">
    <ae:displayName/>
    <ae:id>0</ae:id>
    <ae:uuid/>
    <ae:loginId/>
  </ae:owner>
  <ae:url>http://serverName:80/tmtrack/tmtrack.dll?IssuePage&
  →RecordId=106&Template=view&TableId=1000</ae:url>
</ae:item>
</ae:return>
  <ae:return>
    <ae:status>
      <ae:status>IS-ERROR</ae:status>
    </ae:status>
  </ae:return>
```

```
        <ae:message>Invalid item id 0 for table 1000.</ae:message>
    </ae:status>
</ae:return>
<ae:return>
<ae:item>
    <ae:id xsi:type="ae:ItemIdentifier">
        <ae:displayName>BUG000173</ae:displayName>
        <ae:id>109</ae:id>
        <ae:uuid>c1e62a05-5dd1-46e7-9cdc-b91518893b23</ae:uuid>
        <ae:tableId>1000</ae:tableId>
        <ae:tableIdItemId>1000:109</ae:tableIdItemId>
        <ae:issueId>000173</ae:issueId>
    </ae:id>
    <ae:itemType>Bug Report</ae:itemType>
    <ae:project xsi:type="ae:ProjectIdentifier">
        <ae:displayName>IDM Project</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</ae:uuid>
        <ae:fullyQualifiedName>Base Project||IDM Project</ae:fullyQualifiedName>
        <ae:internalName>TTT_ISSUES.IDM_PROJECT</ae:internalName>
    </ae:project>
    <ae:title>Image Builder crashes my system.</ae:title>
    <ae:description>When user logs on to Image Builder, she gets a blue
    →screen.</ae:description>
    <ae:createdBy xsi:type="ae:UserIdentifier">
        <ae:displayName>Jan Lvl 2 Support</ae:displayName>
        <ae:id>18</ae:id>
        <ae:uuid>09c6aa7e-e2b9-4ff4-9377-0d4090cab4fe</ae:uuid>
        <ae:loginId>jan</ae:loginId>
    </ae:createdBy>
    <ae:createDate>2009-02-19T19:44:33Z</ae:createDate>
    <ae:modifiedBy xsi:type="ae:UserIdentifier">
        <ae:displayName>Administrator</ae:displayName>
        <ae:id>8</ae:id>
        <ae:uuid>9f9146a3-a273-4411-8000-8396688b7554</ae:uuid>
        <ae:loginId>admin</ae:loginId>
    </ae:modifiedBy>
    <ae:modifiedDate>2010-09-08T21:55:07Z</ae:modifiedDate>
    <ae:activeInactive>true</ae:activeInactive>
    <ae:state xsi:type="ae:StateIdentifier">
        <ae:displayName>Testing Issue</ae:displayName>
        <ae:id>5</ae:id>
        <ae:uuid>4c9d41b8-d5b3-49ef-a69c-d9e6320ad85a</ae:uuid>
        <ae:internalName>SOFTWARE_ISSUES.TESTING_ISSUE</ae:internalName>
        <ae:isClosed>>false</ae:isClosed>
    </ae:state>
    <ae:owner xsi:type="ae:UserIdentifier">
        <ae:displayName>Rhadika Tester</ae:displayName>
        <ae:id>28</ae:id>
        <ae:uuid>43a37118-c82a-4fbd-803f-alf0ad127c12</ae:uuid>
        <ae:loginId>rhadika</ae:loginId>
    </ae:owner>
    <ae:url>http://serverName:80/tmtrack/tmtrack.dll?IssuePage&amp;
```

```
→RecordId=109&Template=view&TableId=1000</ae:url>  
</ae:item>
```

TTItemList

Description

The TTItemList type contains the items and the total count of items that are returned from GetItemsByQuery. The TTItemList type parameters are listed below.

Parameters

Name	Type	Description
item	TTItem [page 133]	The <i>TTItem</i> type holds the generic data for an item.
totalCount	integer	The total number of items returned by the query.

Usage

The TTItemList type holds all of the field information for items that are returned by GetItemsByQuery, along with a count of the total number of returned items.

XML

The following XML snippet shows TTItemList in the return element of the GetItemsByQuery response.

```
<ae:GetItemsByQueryResponse>  
  <ae:return>  
    <ae:item>  
      <ae:id xsi:type="ae:ItemIdentifier">  
        <ae:displayName>BUG000030</ae:displayName>  
        <ae:id>14</ae:id>  
        <ae:uuid>79fd7446-f96e-4265-b765-cbcd0e66357f</ae:uuid>  
        <ae:tableId>1000</ae:tableId>  
        <ae:tableIdItemId>1000:14</ae:tableIdItemId>  
        <ae:issueId>000030</ae:issueId>  
      </ae:id>  
      <detailed_item_data>  
    </ae:item>  
    <ae:item>  
      <ae:id xsi:type="ae:ItemIdentifier">  
        <ae:displayName>ENH000032</ae:displayName>  
        <ae:id>15</ae:id>  
        <ae:uuid>49a065dd-cf7f-499c-852f-a78c751fdd2f</ae:uuid>  
        <ae:tableId>1000</ae:tableId>  
        <ae:tableIdItemId>1000:15</ae:tableIdItemId>  
        <ae:issueId>000032</ae:issueId>  
      </ae:id>  
      <detailed_item_data>  
    </ae:item>  
    <ae:totalCount>2</ae:totalCount>
```

```
</ae:return>
</ae:GetItemsByQueryResponse>
```

UserHolder

Description

The UserHolder type contains the UserInfo response and any errors for user records that were not successfully returned. The UserHolder type parameters are listed below.

Parameters

Name	Type	Description
user	UserInfo [page 242]	The userInfo type holds the complete information that describes a user.
status	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The UserHolder type holds detailed information for a user and his or her preferences. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML snippet shows UserHolder in the `<ae:user>` return element of the GetUsers response. Note that an error message is returned in this example (inside the `message` element). In this example, three users were requested using the GetUsers call; however, the second user (Kathy) was not properly identified. Therefore, an error was returned for the second user, though the service continued to run and returned the third user (Laura).

```
<ae:GetUsersResponse>
  <ae:return>
    <ae:user>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>John Support Manager</ae:displayName>
        <ae:id>21</ae:id>
        <ae:uuid>08784a43-970f-4d28-9a6e-c301077ca653</ae:uuid>
        <ae:loginId>john</ae:loginId>
      </ae:id>
      <ae:accessType>ACCESS-USER</ae:accessType>
      <ae:email>john@companyName.com</ae:email>
      <ae:emailCC/>
      <ae:timezone/>
      <ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
      <ae:dstSavings>3600000</ae:dstSavings>
      <ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
      <ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
```

```
<ae:namespaceName>00000</ae:namespaceName>
<ae:phoneNumber/>
<ae:locale>en_US</ae:locale>
<ae:isDeleted>>false</ae:isDeleted>
<ae:maxNotes>10</ae:maxNotes>
<ae:maxChangeHistory>10</ae:maxChangeHistory>
<ae:maxItemsPerPage>20</ae:maxItemsPerPage>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>Everyone</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>ade39c21-e7b2-4dcb-a231-d3d872671b59</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IDM View Only</ae:displayName>
  <ae:id>5</ae:id>
  <ae:uuid>af38532d-e79c-495f-a3e6-f4bf784cc492</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Technician</ae:displayName>
  <ae:id>6</ae:id>
  <ae:uuid>902a1300-6ae1-44d7-b46a-e420babe8497</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Manager</ae:displayName>
  <ae:id>7</ae:id>
  <ae:uuid>b70af5de-6642-4228-b9bb-d0da59bb6909</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Administrator</ae:displayName>
  <ae:id>8</ae:id>
  <ae:uuid>b77b6e9d-e75a-4841-be1b-9c358affb797</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Approval Board Members</ae:displayName>
  <ae:id>13</ae:id>
  <ae:uuid>ea167b8c-e9ea-4196-9727-dfd2f10fd751</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Submitters</ae:displayName>
  <ae:id>11</ae:id>
  <ae:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</ae:uuid>
</ae:group>
<ae:fieldsMask>1</ae:fieldsMask>
<ae:notesMask>4</ae:notesMask>
<ae:changeHistoryMask>4</ae:changeHistoryMask>
<ae:browserMask>13635632</ae:browserMask>
<ae:preferredSolution xsi:type="ae:SolutionIdentifier">
  <ae:displayName>Incident Management</ae:displayName>
  <ae:id>2</ae:id>
  <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
  <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
  <ae:tabName>Incident Mgmt</ae:tabName>
</ae:preferredSolution>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
```

```
<ae:displayName>Incident Management</ae:displayName>
<ae:id>2</ae:id>
<ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
<ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
<ae:tabName>Incident Mgmt</ae:tabName>
</ae:solution>
<ae:homeReport xsi:type="ae:ReportIdentifier">
  <ae:displayName>Trend Of Incidents Closed On Initial Call</ae:displayName>
  <ae:id>38</ae:id>
  <ae:uuid>f8a5ce79-4b40-45cf-9f6d-735d060e90de</ae:uuid>
</ae:homeReport>
</ae:solutionData>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Change Request Management</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
    <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
    <ae:tabName>Change Requests</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
    <ae:id>-6</ae:id>
    <ae:uuid>-6</ae:uuid>
  </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Issue Defect Management</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
    <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
    <ae:tabName>IDM</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
    <ae:id>-6</ae:id>
    <ae:uuid>-6</ae:uuid>
  </ae:homeReport>
</ae:solutionData>
</ae:user>
</ae:return>
<ae:return>
  <ae:status>
    <ae:status>IS-ERROR</ae:status>
    <ae:message>Invalid user Kath.</ae:message>
  </ae:status>
</ae:return>
<ae:return>
  <ae:user>
    <ae:id xsi:type="ae:UserIdentifier">
      <ae:displayName>Laura Engineer</ae:displayName>
      <ae:id>5</ae:id>
      <ae:uuid>e0538593-21aa-4ca5-a229-473563c21470</ae:uuid>
      <ae:loginId>laura</ae:loginId>
    </ae:id>
  </ae:user>
</ae:return>
</ae:return>
```

```
</ae:id>
<ae:accessType>ACCESS-USER</ae:accessType>
<ae:email>laura@companyName.com</ae:email>
<ae:emailCC/>
<ae:timezone/>
<ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
<ae:dstSavings>3600000</ae:dstSavings>
<ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
<ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
<ae:namespaceName>00000</ae:namespaceName>
<ae:phoneNumber/>
<ae:locale>en_US</ae:locale>
<ae:isDeleted>>false</ae:isDeleted>
<ae:maxNotes>10</ae:maxNotes>
<ae:maxChangeHistory>10</ae:maxChangeHistory>
<ae:maxItemsPerPage>20</ae:maxItemsPerPage>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>Everyone</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>ade39c21-e7b2-4dcb-a231-d3d872671b59</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IDM Team</ae:displayName>
  <ae:id>2</ae:id>
  <ae:uuid>634aed4a-bc98-49d3-86f0-6095c2f7b9b6</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Technical Analysts</ae:displayName>
  <ae:id>12</ae:id>
  <ae:uuid>661c1c5b-2e1d-4ad1-9d43-60a3dad6f931</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Submitters</ae:displayName>
  <ae:id>11</ae:id>
  <ae:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</ae:uuid>
</ae:group>
<ae:fieldsMask>1</ae:fieldsMask>
<ae:notesMask>4</ae:notesMask>
<ae:changeHistoryMask>4</ae:changeHistoryMask>
<ae:browserMask>13635632</ae:browserMask>
<ae:preferredSolution xsi:type="ae:SolutionIdentifier">
  <ae:displayName>Issue Defect Management</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
  <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
  <ae:tabName>IDM</ae:tabName>
</ae:preferredSolution>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Issue Defect Management</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
    <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
    <ae:tabName>IDM</ae:tabName>
  </ae:solution>
```

```

    <ae:homeReport xsi:type="ae:ReportIdentifier">
      <ae:displayName>My In Box</ae:displayName>
      <ae:id>54</ae:id>
      <ae:uuid>034982d7-822e-421e-88cf-1fe2cb436785</ae:uuid>
    </ae:homeReport>
  </ae:solutionData>
  <ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Incident Management</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
      <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
      <ae:tabName>Incident Mgmt</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
      <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
      <ae:id>-11</ae:id>
      <ae:uuid>-11</ae:uuid>
    </ae:homeReport>
  </ae:solutionData>
  <ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
      <ae:displayName>Change Request Management</ae:displayName>
      <ae:id>3</ae:id>
      <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
      <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
      <ae:tabName>Change Requests</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
      <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
      <ae:id>-11</ae:id>
      <ae:uuid>-11</ae:uuid>
    </ae:homeReport>
  </ae:solutionData>
</ae:user>
</ae:return>
</ae:GetUsersResponse>

```

UserInfo

Description

The UserInfo type holds the name and other information about a user in SBM. The UserInfo type parameters are listed below.

Parameters

Name	Type	Description
id	UserIdentifier [page 157]	The login ID of the user.

Name	Type	Description
accessType	AccessType [page 192]	Shows the user's product-access type.
email	string	The user's primary email address.
emailCC	string	The user's CC email addresses.
timezone	string	The user's time zone.
offsetFromGMT	integer	This is the time zone's raw GMT offset.
dstSavings	integer	The amount of time in milliseconds to be added to local standard time to get local wall clock time.
datePreference	DatePreference [page 195]	The user's date preference.
timePreference	TimePreference [page 232]	The user's time preference.
namespaceName	string	The user's namespace name.
phoneNumber	string	The user's phone number.
locale	string	The user's designated locale.
isDeleted	boolean	Indicates whether the user is marked as deleted or not.
contact	ContactIdentifier [page 98]	Holds identification information for the user's associated contact record.
maxNotes	integer	Indicates the maximum number of notes to display on an item.
maxChangeHistory	integer	Indicates the maximum number of change history records to display on an item.
maxItemsPerPage	integer	Indicates the maximum number of items to display per page in search and report results.
fieldsMask	integer	Bit mask that indicates which field sections the user would like displayed as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .

Name	Type	Description
notesMask	integer	Bit mask that indicates the user's preference for displaying notes as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .
changeHistoryMask	integer	Bit mask that indicates the user's preference for displaying change history information as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .
browserMask	integer	Bit mask that indicates the user's browser preferences as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .
group	GroupIdentifier [page 105]	Holds the identification information for groups to which the user belongs. One or more GroupIdentifiers are returned for each group.
preferredSolution	SolutionIdentifier [page 122]	Holds the identification information for the user's preferred application. This setting determines which application tab is selected by default when the user first enters the SBM User Workspace.
solutionData	UserSolutionData [page 247]	Contains the ordered-list of application tabs that appear for the user in the SBM User Workspace. The application identification information, home page report, and user's preferred projects are returned for each application.

Usage

The UserInfo type provides a user account in SBM. Use [GetUsers \[page 71\]](#) to retrieve a list of attributes for a specified user.

The timezone parameter is a programmatic ID; for example, "America/Los_Angeles". This ID is used to call up a specific real-world time zone. It corresponds to the IDs defined in the standard Olson data used by UNIX systems, and has the format continent/city or ocean/city.

The offsetFromGMT parameter is the time zone's raw GMT offset (i.e., the number of milliseconds to add to GMT to get local time, before taking Daylight Saving Time into account). If DST is in effect for a given date, use the dstSavings value to adjust this offset.

The dstSavings parameter is the amount of time in milliseconds to be added to local standard time to get local wall clock time. If Daylight Saving Time is not observed in this

user's timezone, this value will be 0. This value should be used only to adjust a date/time that is within the DST observation period.

The namespaceName parameter returns the name of the namespace that was generated while provisioning the customer environment. If the user does not belong to a namespace, then the default namespace name ("00000") is returned.

XML

The following XML snippet shows the UserInfo type in the return element of the GetUsers response.

```
<ae:user>
  <ae:id xsi:type="ae:UserIdentifier">
    <ae:displayName>John Support Manager</ae:displayName>
    <ae:id>21</ae:id>
    <ae:uuid>08784a43-970f-4d28-9a6e-c301077ca653</ae:uuid>
    <ae:loginId>john</ae:loginId>
  </ae:id>
  <ae:accessType>ACCESS-USER</ae:accessType>
  <ae:email>john@companyName.com</ae:email>
  <ae:emailCC/>
  <ae:timezone/>
  <ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
  <ae:dstSavings>3600000</ae:dstSavings>
  <ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
  <ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
  <ae:namespaceName>00000</ae:namespaceName>
  <ae:phoneNumber/>
  <ae:locale>en_US</ae:locale>
  <ae:isDeleted>>false</ae:isDeleted>
  <ae:maxNotes>10</ae:maxNotes>
  <ae:maxChangeHistory>10</ae:maxChangeHistory>
  <ae:maxItemsPerPage>20</ae:maxItemsPerPage>
  <ae:group xsi:type="ae:GroupIdentifier">
    <ae:displayName>Everyone</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>ade39c21-e7b2-4dcb-a231-d3d872671b59</ae:uuid>
  </ae:group>
  <ae:group xsi:type="ae:GroupIdentifier">
    <ae:displayName>IDM View Only</ae:displayName>
    <ae:id>5</ae:id>
    <ae:uuid>af38532d-e79c-495f-a3e6-f4bf784cc492</ae:uuid>
  </ae:group>
  <ae:group xsi:type="ae:GroupIdentifier">
    <ae:displayName>IM Technician</ae:displayName>
    <ae:id>6</ae:id>
    <ae:uuid>902a1300-6ae1-44d7-b46a-e420babe8497</ae:uuid>
  </ae:group>
  <ae:group xsi:type="ae:GroupIdentifier">
    <ae:displayName>IM Manager</ae:displayName>
    <ae:id>7</ae:id>
    <ae:uuid>b70af5de-6642-4228-b9bb-d0da59bb6909</ae:uuid>
  </ae:group>
  <ae:group xsi:type="ae:GroupIdentifier">
    <ae:displayName>IM Administrator</ae:displayName>
```

```
<ae:id>8</ae:id>
  <ae:uuid>b77b6e9d-e75a-4841-be1b-9c358affb797</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Approval Board Members</ae:displayName>
  <ae:id>13</ae:id>
  <ae:uuid>ea167b8c-e9ea-4196-9727-dfd2f10fd751</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Submitters</ae:displayName>
  <ae:id>11</ae:id>
  <ae:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</ae:uuid>
</ae:group>
<ae:fieldsMask>1</ae:fieldsMask>
<ae:notesMask>4</ae:notesMask>
<ae:changeHistoryMask>4</ae:changeHistoryMask>
<ae:browserMask>13635632</ae:browserMask>
<ae:preferredSolution xsi:type="ae:SolutionIdentifier">
  <ae:displayName>Incident Management</ae:displayName>
  <ae:id>2</ae:id>
  <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
  <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
  <ae:tabName>Incident Mgmt</ae:tabName>
</ae:preferredSolution>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Incident Management</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
    <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
    <ae:tabName>Incident Mgmt</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Trend Of Incidents Closed On Initial Call</ae:displayName>
    <ae:id>38</ae:id>
    <ae:uuid>f8a5ce79-4b40-45cf-9f6d-735d060e90de</ae:uuid>
  </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Change Request Management</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
    <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
    <ae:tabName>Change Requests</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
    <ae:id>-6</ae:id>
    <ae:uuid>-6</ae:uuid>
  </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Issue Defect Management</ae:displayName>
```

```

    <ae:id>1</ae:id>
    <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
    <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
    <ae:tabName>IDM</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
    <ae:id>-6</ae:id>
    <ae:uuid>-6</ae:uuid>
  </ae:homeReport>
</ae:solutionData>
</ae:user>

```

UserSolutionData

Description

The UserSolutionData type holds identification information and user settings for a solution (also known as an application) in SBM. The UserSolutionData type parameters are listed below.

Parameters

Name	Type	Description
solution	SolutionIdentifier [page 122]	Holds the identification information for a solution.
homeReport	ReportIdentifier [page 119]	Holds the identification information for a report. The report that is returned indicates the user's home page report.
preferredProject	ProjectIdentifier [page 114]	Holds the identification for a project. One or more projects are returned. The list of projects indicates the user's preferred projects.

Usage

The UserSolutionData type holds the SolutionIdentifier and additional information used to describe the settings for an application that a user has access to. You can use [GetUsers](#) [page 71] to retrieve the user solution data shown here. The GetUsers response contains one or more UserSolutionData elements that comprise an ordered-list of the application tabs that are available to the user in the SBM User Workspace.

XML

The following XML snippet shows the UserSolutionData type in the return element of the GetUsers response.

```

<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Incident Management</ae:displayName>
    <ae:id>2</ae:id>
  </ae:solution>
</ae:solutionData>

```

```

<ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
<ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
<ae:tabName>Incident Mgmt</ae:tabName>
</ae:solution>
<ae:homeReport xsi:type="ae:ReportIdentifier">
  <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
  <ae:id>-11</ae:id>
  <ae:uuid>-11</ae:uuid>
</ae:homeReport>
</ae:solutionData>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Change Request Management</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
    <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
    <ae:tabName>Change Requests</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
    <ae:id>-11</ae:id>
    <ae:uuid>-11</ae:uuid>
  </ae:homeReport>
</ae:solutionData>

```

Workflow

Description

The Workflow type holds the name and other information about a workflow in SBM. The Workflow type parameters are listed below.

Parameters

Name	Type	Description
id	WorkflowIdentifier [page 158]	Holds identification information for a workflow.
state	WorkflowState [page 257]	Holds graphical workflow information for a state.
transition	WorkflowTransition [page 258]	Holds graphical workflow information for a transition.
comment	WorkflowComment [page 252]	Hold graphical workflow information for an annotation.
band	WorkflowBand [page 251]	Holds graphical workflow information for a swimlane.

Name	Type	Description
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The Workflow type completely describes a graphical workflow in SBM. Use [GetWorkflows](#) [page 74] to retrieve the graphical workflow for a specified project.

XML

The following XML snippet shows the Workflow type in the return element of the [GetWorkflows](#) response.

```

<ae:workflow>
  <ae:id xsi:type="ae:WorkflowIdentifier">
    <ae:displayName>IDM</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>5296c4b1-4bab-48a9-83b3-1f633894ef33</ae:uuid>
  </ae:id>
  <ae:state>
    <ae:id xsi:type="ae:StateIdentifier">
      <ae:displayName>None</ae:displayName>
      <ae:id>0</ae:id>
      <ae:uuid/>
      <ae:internalName/>
      <ae:isClosed>>false</ae:isClosed>
    </ae:id>
    <ae:center>
      <ae:x>63</ae:x>
      <ae:y>0</ae:y>
    </ae:center>
    <ae:size>
      <ae:width>63</ae:width>
      <ae:height>63</ae:height>
    </ae:size>
    <ae:radius>0</ae:radius>
  </ae:state>
  <ae:state>
    <ae:id xsi:type="ae:StateIdentifier">
      <ae:displayName>E-mail</ae:displayName>
      <ae:id>-3</ae:id>
      <ae:uuid/>
      <ae:internalName/>
      <ae:isClosed>>false</ae:isClosed>
    </ae:id>
    <ae:center>
      <ae:x>63</ae:x>
      <ae:y>-106</ae:y>
    </ae:center>
    <ae:size>
      <ae:width>63</ae:width>
      <ae:height>63</ae:height>
  </ae:state>
</ae:workflow>

```

```
        </ae:size>
        <ae:radius>0</ae:radius>
    </ae:state>
    ...
    <ae:transition>
        <ae:id xsi:type="ae:TransitionIdentifier">
            <ae:displayName>Update</ae:displayName>
            <ae:id>1</ae:id>
            <ae:uuid>update</ae:uuid>
            <ae:internalName>UPDATE</ae:internalName>
        </ae:id>
        <ae:style>STYLE-POLYLINE</ae:style>
        <ae:point>
            <ae:x>38</ae:x>
            <ae:y>-381</ae:y>
        </ae:point>
        <ae:point>
            <ae:x>90</ae:x>
            <ae:y>-380</ae:y>
        </ae:point>
        <ae:point>
            <ae:x>90</ae:x>
            <ae:y>-450</ae:y>
        </ae:point>
        <ae:point>
            <ae:x>5</ae:x>
            <ae:y>-450</ae:y>
        </ae:point>
        <ae:point>
            <ae:x>6</ae:x>
            <ae:y>-406</ae:y>
        </ae:point>
        <ae:styleClass>NormalPath</ae:styleClass>
        <ae:labelPosition>
            <ae:x>88</ae:x>
            <ae:y>-400</ae:y>
        </ae:labelPosition>
    </ae:transition>
    <ae:transition>
        <ae:id xsi:type="ae:TransitionIdentifier">
            <ae:displayName>Delete</ae:displayName>
            <ae:id>2</ae:id>
            <ae:uuid>delete</ae:uuid>
            <ae:internalName>DELETE</ae:internalName>
        </ae:id>
        <ae:style>STYLE-STRAIGHT</ae:style>
        <ae:point>
            <ae:x>-31</ae:x>
            <ae:y>-406</ae:y>
        </ae:point>
        <ae:point>
            <ae:x>-31</ae:x>
            <ae:y>-519</ae:y>
        </ae:point>
        <ae:styleClass>NormalPath</ae:styleClass>
```

```

    <ae:labelPosition>
      <ae:x>-31</ae:x>
      <ae:y>-444</ae:y>
    </ae:labelPosition>
  </ae:transition>
  ...
  <ae:comment>
    <ae:id>1020</ae:id>
    <ae:center>
      <ae:x>559</ae:x>
      <ae:y>-109</ae:y>
    </ae:center>
    <ae:size>
      <ae:width>169</ae:width>
      <ae:height>56</ae:height>
    </ae:size>
    <ae:text>The Fail transition will increment the QA Reject Count</ae:text>
    <ae:styleClass/>
    <ae:styleOverride>font: Arial;fontsize: 8;align: Near;valign: Near;
→cornerradius: 0;</ae:styleOverride>
  </ae:comment>
  <ae:comment>
    <ae:id>1021</ae:id>
    <ae:center>
      <ae:x>140</ae:x>
      <ae:y>269</ae:y>
    </ae:center>
    <ae:size>
      <ae:width>169</ae:width>
      <ae:height>38</ae:height>
    </ae:size>
    <ae:text>IDM Users cannot defer the Issue</ae:text>
    <ae:styleClass/>
    <ae:styleOverride>font: Arial;fontsize: 8;align: Near;valign: Near;
→cornerradius: 0;</ae:styleOverride>
  </ae:comment>
</ae:workflow>

```

WorkflowBand

Description

The WorkflowBand type holds details about a swimlane in the graphical workflow. The WorkflowBand type parameters are listed below.

Parameters

Name	Type	Description
id	Identifier [page 107]	Holds generic identification information for a swimlane.
origin	integer	Location where the swimlane starts.

Name	Type	Description
orientation	Band-Orientation [page 97]	Describes whether the swimlane is horizontal or vertical.
description	string	The description of the swimlane.
size	integer	The size of the swimlane.
styleClass	string	The class name.
styleOverride	string	Describes style overrides for the swimlane.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The WorkflowBand type describes the positioning and style of a swimlane in the graphical workflow. For details on the graphical workflow, refer to [Workflow \[page 248\]](#).

XML

The following XML snippet shows the WorkflowBand type in the return element of the GetWorkflows response.

```
<ae:band>
  <ae:id>
    <ae:displayName>Level 2</ae:displayName>
    <ae:id>9</ae:id>
    <ae:uuid>46b90f9c-4a3e-44c8-af37-15b148c38a49</ae:uuid>
  </ae:id>
  <ae:origin>-175</ae:origin>
  <ae:orientation>BAND-VERTICAL</ae:orientation>
  <ae:description/>
  <ae:size>175</ae:size>
  <ae:styleClass/>
  <ae:styleOverride>bgcolor: #F7931E;align: Center;valign: Center;
→cornerradius: 0;</ae:styleOverride>
</ae:band>
```

WorkflowComment

Description

The WorkflowComment type holds details about an annotation in the graphical workflow. The WorkflowComment type parameters are listed below.

Parameters

Name	Type	Description
id	integer	The TS_ID of the annotation from the TS_GWECOMMENTS table.
center	Point [page 209]	The location of the annotation.
size	Size [page 225]	The size of the annotation.
text	string	Contents of the annotation.
styleClass	string	The class name.
styleOverride	string	Describes style overrides for the comment.
ownerTransition	TransitionIdentifier [page 128]	The associated transition.
ownerState	StateIdentifier [page 124]	The associated state.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The WorkflowComment type describes the in the graphical workflow. For details on the graphical workflow, refer to [Workflow \[page 248\]](#).

XML

The following XML snippet shows the WorkflowComment type in the return element of the GetWorkflows response.

```
<ae:comment>
  <ae:id>1069</ae:id>
  <ae:center>
    <ae:x>625</ae:x>
    <ae:y>-28</ae:y>
  </ae:center>
  <ae:size>
    <ae:width>125</ae:width>
    <ae:height>56</ae:height>
  </ae:size>
  <ae:text>Any Help Desk team member can perform Assign.</ae:text>
  <ae:styleClass/>
  <ae:styleOverride>align: Near;valign: Near;cornerradius: 0;</ae:styleOverride>
  <ae:ownerTransition xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Assign</ae:displayName>
    <ae:id>24</ae:id>
```

```

    <ae:uuid>5cfc09ea-3c98-4351-b3b7-22a6d10bba37</ae:uuid>
    <ae:internalName>IM.ASSIGN</ae:internalName>
  </ae:ownerTransition>
</ae:comment>

```

WorkflowHolder

Description

The WorkflowHolder type contains the GetWorkflows response and any errors for roles that were not successfully returned. The WorkflowHolder type parameters are listed below.

Parameters

Name	Type	Description
workflow	Workflow [page 248]	Holds complete information about a workflow diagram.
status	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The WorkflowHolder type returns detailed information for workflow diagrams that you create in SBM Composer. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML shows some parts of WorkflowHolder as seen in GetWorkflowsResponse.

```

<ae:workflow>
  <ae:id xsi:type="ae:WorkflowIdentifier">
    <ae:displayName>IDM</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>5296c4b1-4bab-48a9-83b3-1f633894ef33</ae:uuid>
  </ae:id>
  <ae:state>
    <ae:id xsi:type="ae:StateIdentifier">
      <ae:displayName>None</ae:displayName>
      <ae:id>0</ae:id>
      <ae:uuid/>
      <ae:internalName/>
      <ae:isClosed>>false</ae:isClosed>
    </ae:id>
    <ae:center>
      <ae:x>63</ae:x>
      <ae:y>0</ae:y>
    </ae:center>
    <ae:size>

```

```

        <ae:width>63</ae:width>
        <ae:height>63</ae:height>
    </ae:size>
    <ae:radius>0</ae:radius>
</ae:state>
<ae:state>
    <ae:id xsi:type="ae:StateIdentifier">
        <ae:displayName>E-mail</ae:displayName>
        <ae:id>-3</ae:id>
        <ae:uuid/>
        <ae:internalName/>
        <ae:isClosed>>false</ae:isClosed>
    </ae:id>
    <ae:center>
        <ae:x>63</ae:x>
        <ae:y>-106</ae:y>
    </ae:center>
    <ae:size>
        <ae:width>63</ae:width>
        <ae:height>63</ae:height>
    </ae:size>
    <ae:radius>0</ae:radius>
</ae:state>
...
<ae:transition>
    <ae:id xsi:type="ae:TransitionIdentifier">
        <ae:displayName>Update</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>update</ae:uuid>
        <ae:internalName>UPDATE</ae:internalName>
    </ae:id>
    <ae:style>STYLE-POLYLINE</ae:style>
    <ae:point>
        <ae:x>38</ae:x>
        <ae:y>-381</ae:y>
    </ae:point>
    <ae:point>
        <ae:x>90</ae:x>
        <ae:y>-380</ae:y>
    </ae:point>
    <ae:point>
        <ae:x>90</ae:x>
        <ae:y>-450</ae:y>
    </ae:point>
    <ae:point>
        <ae:x>5</ae:x>
        <ae:y>-450</ae:y>
    </ae:point>
    <ae:point>
        <ae:x>6</ae:x>
        <ae:y>-406</ae:y>
    </ae:point>
    <ae:styleClass>NormalPath</ae:styleClass>
    <ae:labelPosition>
        <ae:x>88</ae:x>

```

```

        <ae:y>-400</ae:y>
    </ae:labelPosition>
</ae:transition>
<ae:transition>
    <ae:id xsi:type="ae:TransitionIdentifier">
        <ae:displayName>Delete</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>delete</ae:uuid>
        <ae:internalName>DELETE</ae:internalName>
    </ae:id>
    <ae:style>STYLE-STRAIGHT</ae:style>
    <ae:point>
        <ae:x>-31</ae:x>
        <ae:y>-406</ae:y>
    </ae:point>
    <ae:point>
        <ae:x>-31</ae:x>
        <ae:y>-519</ae:y>
    </ae:point>
    <ae:styleClass>NormalPath</ae:styleClass>
    <ae:labelPosition>
        <ae:x>-31</ae:x>
        <ae:y>-444</ae:y>
    </ae:labelPosition>
</ae:transition>
...
<ae:comment>
    <ae:id>1020</ae:id>
    <ae:center>
        <ae:x>559</ae:x>
        <ae:y>-109</ae:y>
    </ae:center>
    <ae:size>
        <ae:width>169</ae:width>
        <ae:height>56</ae:height>
    </ae:size>
    <ae:text>The Fail transition will increment the QA Reject Count</ae:text>
    <ae:styleClass/>
    <ae:styleOverride>font: Arial;fontsize: 8;align: Near;valign: Near;
→cornerradius: 0;</ae:styleOverride>
</ae:comment>
<ae:comment>
    <ae:id>1021</ae:id>
    <ae:center>
        <ae:x>140</ae:x>
        <ae:y>269</ae:y>
    </ae:center>
    <ae:size>
        <ae:width>169</ae:width>
        <ae:height>38</ae:height>
    </ae:size>
    <ae:text>IDM Users cannot defer the Issue</ae:text>
    <ae:styleClass/>
    <ae:styleOverride>font: Arial;fontsize: 8;align: Near;valign: Near;

```



```
→cornerradius: 0;</ae:styleOverride>
</ae:comment>
</ae:workflow>
```

WorkflowState

Description

The WorkflowState type holds details about a state in the graphical workflow. The WorkflowState type parameters are listed below.

Parameters

Name	Type	Description
id	StateIdentifier [page 124]	Holds identification information for a state.
center	Point [page 209]	The coordinate on which the state is centered.
size	Size [page 225]	The size of the state in the diagram.
radius	integer	The radius of the state.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The WorkflowState type completely describes the positioning and size of a state in the graphical workflow. For details on the graphical workflow, refer to [Workflow \[page 248\]](#).

XML

The following XML snippet shows the WorkflowState type in the return element of the GetWorkflows response.

```
<ae:state>
  <ae:id xsi:type="ae:StateIdentifier">
    <ae:displayName>None</ae:displayName>
    <ae:id>0</ae:id>
    <ae:uuid/>
    <ae:internalName/>
    <ae:isClosed>>false</ae:isClosed>
  </ae:id>
  <ae:center>
    <ae:x>63</ae:x>
    <ae:y>0</ae:y>
  </ae:center>
  <ae:size>
    <ae:width>63</ae:width>
    <ae:height>63</ae:height>
```

```

</ae:size>
<ae:radius>0</ae:radius>
</ae:state>

```

WorkflowTransition

Description

The WorkflowTransition type holds details about a transition in the graphical workflow. The WorkflowTransition type parameters are listed below.

Parameters

Name	Type	Description
id	TransitionIdentifier [page 128]	Holds identification information for a transition.
style	Transition-Style [page 129]	Describes the visual appearance of the transition.
point	Point [page 209]	The coordinates that describe where the transition starts and stops.
styleClass	string	Provides a visual reminder of the purpose, use, or importance of a transition.
labelPosition	Point [page 209]	The location of the transition's label.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The WorkflowTransition type describes the positioning and of a transition in the graphical workflow. For details on the graphical workflow, refer to [Workflow \[page 248\]](#).

XML

The following XML snippet shows the WorkflowTransition type in the return element of the GetWorkflows response.

```

<ae:transition>
  <ae:id xsi:type="ae:TransitionIdentifier">
    <ae:displayName>Delete</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>delete</ae:uuid>
    <ae:internalName>DELETE</ae:internalName>
  </ae:id>
  <ae:style>STYLE-STRAIGHT</ae:style>
  <ae:point>
    <ae:x>-31</ae:x>

```

```
<ae:y>-406</ae:y>
</ae:point>
<ae:point>
  <ae:x>-31</ae:x>
  <ae:y>-519</ae:y>
</ae:point>
<ae:styleClass>NormalPath</ae:styleClass>
<ae:labelPosition>
  <ae:x>-31</ae:x>
  <ae:y>-444</ae:y>
</ae:labelPosition>
</ae:transition>
```

SBM Administrative Web Services

This section contains reference material for all of the SBM Administrative Web Services (as described in the sbadmins-services72 WSDL).

- [Administrative Calls \[page 259\]](#)
- [Common Types \[page 316\]](#)
- [Arguments \[page 350\]](#)
- [Responses \[page 366\]](#)

Administrative Calls

This section describes the Administrative Web service API calls that are available in SBM. These calls represent the Web service operations that are invoked from a client and performed on the SBM Application Engine Web Server. The calls receive one or more arguments from the client, perform an operation on the server, and return an XML response to the client when applicable.

The following table lists all supported calls in alphabetical order, followed by a brief description of each operation. Select a call to view detailed information including:

- **Description** – A brief description of the call.
- **Arguments** – A table that describes the simple and complex types for each argument. For each complex type, click the type name for a detailed description.
- **Response** – A brief description of the call's response. For each response that is a complex type, click the response name for a detailed description.
- **Usage** – Any notes, additional details, and considerations are addressed here.
- **Faults** – Possible error messages are listed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Administrative Calls

Call	Description
CreateGroups [page 262]	This service creates one or more new groups.
CreateProject [page 265]	This service creates a new project.
CreateUsers [page 268]	This service creates one or more new users.
DeleteProcessApp [page 272]	This service deletes a specified process app.
GetGroupMembers [page 273]	This services returns a list of users who are members of one or more specified groups.
GetGroups [page 274]	This service returns one or more existing groups.
GetGroupPrivileges [page 276]	This services returns a list of privileges for a specified group.
GetGroupRoles [page 278]	This services returns a list of roles for a specified group.

Call	Description
GetRoleGroups [page 279]	This services returns a list of groups that are granted a particular role in a specified project.
GetRoleUsers [page 281]	This services returns a list of users that are granted a particular role in a specified project.
GetPrivilegeTypes [page 282]	This services returns the list of available privilege types.
GetTypePrivileges [page 284]	This services returns a list privileges by type.
GetUserRoles [page 285]	This services returns a list of roles for a specified user.
GetUsers [page 286]	This service returns one or more user records.
GetUserPrivileges [page 289]	This services returns a list of privileges for a specified user.
HasUserRole [page 296]	This service checks for a specified role by name.
GetVersion [page 291]	This service returns the SBM version and build number.
HasGroupPrivilege [page 292]	This service checks for a specified privilege by name.
HasGroupRole [page 293]	This service checks for a specified role by name.
HasUserPrivilege [page 294]	This service checks for a specified privilege by name.
IsValidUser [page 297]	This service determines whether a specified user is valid or not.
Logout [page 298]	This service releases any licenses and resources associated with the session.

Call	Description
SetGroupPrivileges [page 299]	This services sets or revokes privileges for a specified group.
SetGroupRoles [page 303]	This services sets or revokes roles for a specified group.
SetUserPrivileges [page 304]	This services sets or revokes privileges for a specified user.
SetUserRoles [page 307]	This services sets or revokes roles for a specified user.
UpdateGroups [page 309]	This service updates one or more existing groups.
UpdateUsers [page 312]	This service updates one or more existing users.

CreateGroups

Description

This service creates one or more new groups.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
templateGroup	GroupIdentifier [page 327]	Specifies an existing group that should be used as a template for creating new group. New groups are created based on the group account that you provide in the GroupIdentifier.
updateIfExists	boolean	Specify true to update any existing groups that are found with the same displayName.
group (required)	GroupInfo [page 325]	Describes information about a group. Specify one or more group arguments to create one or more new groups.

Argument	Type	Description
options	MultipleOptions [page 357]	Holds name value pairing for future elements and enumeration to determine if the service should stop on failure and send an error message, or continue processing.

Response

GroupHolder is returned. The GroupHolder response contains the GroupIdentifier and additional information about the group. For more specific information, see [GroupHolder \[page 368\]](#).

Usage

The CreateGroups call provides a method to create one or more new user groups, given the proper privileges. Use the following arguments to control how the new user groups are created:

- **templateGroup** – Enables you to specify an existing group in SBM to act as a template for each new group that you create. If you specify a template group as well as additional details in the group argument, the group parameters that you send will overwrite the values provided by the templateGroup.



Note: You can not use the templateGroup argument in combination with an existing group in the group argument to update an existing group (the system returns "Cannot create a duplicate group"). To update existing groups, see [UpdateGroups \[page 309\]](#).

If you do not want to create new groups based on an existing group, do not specify a group in the templateGroup argument. The templateGroup argument is ignored if the updateIfExists argument is set to true.

- **updateIfExists** – Enables you to specify whether existing groups are updated or not. When updateIfExists is true, each group with a display name that matches an existing group is updated based on the parameters sent in the group argument. For example, if the Engineering group already exists in SBM, then the group's current product access is replaced by the accessType value you set in the group argument for the Engineers groups. If you send an empty value and updateIfExists is set to true, then the group's existing value is not changed. To remove existing values, use the UpdateGroups call and set AllowEmptyValues to true. The templateGroup argument is ignored if updateIfExists is set to true.
- **group** – To create new groups, specify one or more unique group arguments. For each unique group argument that you send, an additional group is created in SBM. You must provide the displayName for each new group account. If updateIfExists is set to true and the group names that you send match existing group accounts, then matching groups are updated. If you specify a templateGroup instead, then any additional group information that you provide in the group argument overwrites the corresponding data supplied by the template account. For example, if you specify Engineering as a template group, then the Engineering group's product access and memo value are copied into each new group that you create unless you specifically overwrite these parameters in each group argument.

Faults

- Invalid database pointer.
- The user lacks sufficient permission to create a group.

XML

The following XML is a snippet of the payload that is sent with CreateGroups. In this example, two new groups are created without a template group.

```
<urn:CreateGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:templateGroup>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:templateGroup>
  <urn:updateIfExists></urn:updateIfExists>
  <urn:group>
    <urn:id>
      <urn:displayName>New Group 1</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:id>
    <urn:accessType>ACCESS-USER</urn:accessType>
    <urn:memo>This group contains regular users.</urn:memo>
    <urn:isDeleted></urn:isDeleted>
  </urn:group>
  <urn:group>
    <urn:id>
      <urn:displayName>New Group 2</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:id>
    <urn:accessType>ACCESS-EXTERNAL</urn:accessType>
    <urn:memo>This group contains external users.</urn:memo>
    <urn:isDeleted></urn:isDeleted>
  </urn:group>
  <urn:options>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  </urn:options>
</urn:CreateGroups>
```

In this example, the CR Submitters group is used as a template to create the new group:

```
<urn:CreateGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
```



```

    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:templateGroup>
    <urn:displayName>CR Submitters</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:templateGroup>
  <urn:updateIfExists></urn:updateIfExists>
  <urn:group>
    <urn:id>
      <urn:displayName>New Group</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:id>
    <urn:accessType></urn:accessType>
    <urn:memo>This is a copy of the CR Submitters group.</urn:memo>
    <urn:isDeleted></urn:isDeleted>
  </urn:group>
  <urn:options>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  </urn:options>
</urn:CreateGroups>

```

CreateProject

Description

This service creates a new project.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
projectName (required)	string	The name of the new project. Note this is not the fully qualified project name.
parentProject (required)	ProjectIdentifier [page 332]	Used to specify the new project's parent project.
workflow (required)	WorkflowIdentifier [page 350]	The workflow is required if the Base Project is parent. Otherwise it is optional. The default value is the parent project's workflow.

Argument	Type	Description
useParentProjectWorkflow	boolean	Determines if the project should use the parent project's workflow. Default is true if parent is not Base Project. Default is false if parent is Base Project.
allowSubmit	boolean	Allow items to be submitted into the new project. Default is true .
useParentSequenceNumbers	boolean	Determines if items submitted to the new project are numbered in sequence with items in the parent project. False means the new project will number its items independently of items in the parent project. Default is true .
lastItemSequenceNumber	integer	The next item submitted to the new project will be numbered one greater than this number. 0 means the first item will be numbered 1. Default is 0 . Ignored if useParentSequenceNumbers is true.
zeroFillTo	integer	Zero-fill item numbers within the project to a certain number of digits. For example, 5 would fill to five digits: 00001. Default is 5 . Ignored if useParentSequenceNumbers is true.
allowAnonymousSubmit	boolean	Allow users without user accounts to submit items into the project. Default is false . Ignored if allowSubmit is false.
altName	string	Alternate project name to display to users who do not have view privileges on the project. Default is same as projectName.
description	string	Project description. Default is empty string.
options	Options [page 360]	Holds name value pairing for future arguments.

Response

ProjectData for the newly added project is returned. For more detail, see [ProjectGeneralData \[page 375\]](#).

Usage

The CreateProject call provides a method to add a single project, given the proper privileges. A successfully created project will be added underneath the specified parent project. If sibling projects exist underneath the parent, the newly created project will be placed last. If the call fails, the project is not added.

Faults

- Invalid database pointer.
- The user lacks sufficient permission to create a project.
- The Parent project is not found.
- Workflow is not specified when parent project is Base Project.
- ProjectName is empty, too long, or not unique among siblings.
- Alternate name too long.
- Description too long.
- Workflow type, that is table ID, for the new project's workflow differs from table ID for parent project's workflow.
- zeroFillTo out of range.
- lastItemSequenceNumber out of range.
- Database failure.

XML

The following XML is a snippet of the payload that is sent with CreateProject.

```
<urn:CreateProject>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:projectName>My new project</urn:projectName>
  <urn:parentProject>
    <urn:displayName>IDM Project</urn:displayName>
    <urn:id>2</urn:id>
    <urn:uuid></urn:uuid>
    <urn:internalName>TTT_ISSUES.IDM_PROJECT</urn:internalName>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:parentProject>
  <urn:workflow>
    <urn:displayName></urn:displayName>
```

```

    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:workflow>
  <urn:useParentProjectWorkflow>true</urn:useParentProjectWorkflow>
  <urn:allowSubmit>true</urn:allowSubmit>
  <urn:useParentSequenceNumbers>true</urn:useParentSequenceNumbers>
  <urn:lastItemSequenceNumber>0</urn:lastItemSequenceNumber>
  <urn:zeroFillTo>5</urn:zeroFillTo>
  <urn:allowAnonymousSubmit>false</urn:allowAnonymousSubmit>
  <urn:altName></urn:altName>
  <urn:description>This is a description.</urn:description>
</urn:CreateProject>

```

CreateUsers

Description

This services creates one or more new users.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
templateUser	UserIdentifier [page 339]	Specifies a user account that should be used as a template for creating new users. New users are created based on the user account that you provide in the UserIdentifier.
cloneGroups	boolean	Specify true to create one or more users with the same group membership as the templateUser. Default is false.
updateIfExists	boolean	Specify true to update any existing user accounts that are found with the same displayName and loginId.
user (required)	UserInfo [page 341]	Describes information about a user. Specify one or more user arguments to create one or more new users.
options	UserResponseOptions [page 365]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

NewUser is returned. The NewUser response contains one UserHolder element for each new user that is created. A temporary password is also returned for each new user account. For more specific information, see [NewUser \[page 370\]](#).

Usage

The CreateUsers call enables you create one or more new user accounts in SBM. Use the following arguments to control how the new user accounts are created:

- **templateUser** – Enables you to specify an existing user account in SBM to act as a template for each new user account that you create. If you specify a template user as well as additional user details in the user argument, the user parameters that you send will overwrite the values provided by the templateUser.



Note: You can not use the templateUser argument in combination with an existing user in the user argument to update an existing user account (the system returns "Cannot create a duplicate user"). To update existing user accounts, see [UpdateUsers \[page 312\]](#).

If you do not want to create new user accounts based on an existing account, do not specify a user in the templateUser argument. The templateUser argument is ignored if the updateIfExists argument is set to true.

- **cloneGroups** – Enables you to specify whether or not the group membership of the template user should be replicated for each new user account that you create. If you specify false, new users are created without group membership unless you specify one or more groups in the group element of the user argument. If you specify true, the group membership is cloned and the new user is also added to any additional groups that are specified in the user argument.
- **updateIfExists** – Enables you to specify whether existing user accounts are updated or not. When updateIfExists is true, each user with a login ID or display name that matches an existing user is updated based on the parameters sent in the user argument. For example, if Bill's login ID already exists in SBM, then Bill's e-mail address is replaced by the e-mail address you set in the user argument for Bill. If you send an empty e-mail address and updateIfExists is set to true, then Bill's existing e-mail address is not changed. To remove existing values, use the UpdateUsers call and set AllowEmptyValues to true. The templateUser argument is ignored if updateIfExists is set to true.
- **user** – To create new users, specify one or more unique user arguments. For each unique user argument that you send, an additional user is created in SBM. You must provide both the displayName and loginId for each new user account. If updateIfExists is set to true and the user IDs that you send match existing user accounts, the matching users are updated.

If you specify a templateUser account instead, then any additional user information that you provide in the user argument overwrites the corresponding data supplied by the template account. For example, if you specify Joe as a template user, then Joe's product access, e-mail address, and phone number are copied into each new user account that you create unless you specifically overwrite these parameters in each user argument.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all users have been processed.
- **sections** and **specifiedSections** – Enables you to specify which parts of a user record should be returned. This allows you to limit the data that is returned for a given user. The sections that aren't specified are not included in the response. For example, if you only need basic user information in the response, use the sections parameter to return only the STANDARD section.

For more information on the options elements, see [UserResponseOptions \[page 365\]](#).

Faults

- Invalid database pointer.
- The user ID is not valid.
- The user lacks sufficient permission.
- Create user requires a user login id.
- Create user requires a user display name.

XML

The following XML is a snippet of the payload this is sent with CreateUsers.

```
<urn:CreateUsers>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:templateUser>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:templateUser>
  <urn:cloneGroups>>false</urn:cloneGroups>
  <urn:updateIfExists></urn:updateIfExists>
  <urn:user>
    <urn:id>
      <urn:displayName>John Doe</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:loginId>JDoe</urn:loginId>
    </urn:id>
    <urn:accessType>ACCESS-USER</urn:accessType>
    <urn:email>johndoe@companyName.com</urn:email>
```

```

<urn:emailCC></urn:emailCC>
<urn:timezone></urn:timezone>
<urn:offsetFromGMT>-25200000</urn:offsetFromGMT>
<urn:dstSavings>3600000</urn:dstSavings>
<urn:datePreference>DATE-FORMAT-FROM-LOCALE</urn:datePreference>
<urn:timePreference>TIME-FORMAT-12HOUR</urn:timePreference>
<urn:namespaceName></urn:namespaceName>
<urn:phoneNumber>111-111-1111</urn:phoneNumber>
<urn:locale>en_US</urn:locale>
<urn:isDeleted></urn:isDeleted>
<urn:contact></urn:contact>
<urn:maxNotes>10</urn:maxNotes>
<urn:maxChangeHistory>10</urn:maxChangeHistory>
<urn:maxItemsPerPage>20</urn:maxItemsPerPage>
<urn:group>
  <urn:displayName>CR Submitters</urn:displayName>
</urn:group>
<urn:fieldsMask></urn:fieldsMask>
<urn:notesMask></urn:notesMask>
<urn:changeHistoryMask></urn:changeHistoryMask>
<urn:browserMask></urn:browserMask>
<urn:preferredSolution>
  <urn:displayName>Issue Defect Management</urn:displayName>
</urn:preferredSolution>
<urn:solutionData>
  <urn:solution>
    <urn:displayName>Issue Defect Management</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:uniqueName></urn:uniqueName>
    <urn:tabName>IDM</urn:tabName>
  </urn:solution>
  <urn:homeReport>
    <urn:displayName>Built-In: All Items</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:homeReport>
  <urn:preferredProject>
    <urn:displayName>Animation Pro</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
  </urn:preferredProject>
</urn:solutionData>
</urn:user>
<urn:options>
  <urn:multiOption></urn:multiOption>
  <urn:sections>SECTIONS-ALL</urn:sections>
  <urn:specifiedSections></urn:specifiedSections>
</urn:options>
</urn:CreateUsers>

```

In this example, a new user is created based on Joe's existing user account. Joe's group membership is replicated as well:

```

<urn:CreateUsers>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:templateUser>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId>Joe</urn:loginId>
  </urn:templateUser>
  <urn:cloneGroups>true</urn:cloneGroups>
  <urn:updateIfExists></urn:updateIfExists>
  <urn:user>
    <urn:id>
      <urn:displayName>John Doe</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:loginId>JDoe</urn:loginId>
    </urn:id>
  </urn:user>
</urn:CreateUsers>

```

DeleteProcessApp

Description

This service deletes a specified process app and all its data, given the proper privilege.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
processAppName (required)	string	The name of the process app to be deleted.

Response

An empty XML response is returned:

```
<ae:DeleteProcessAppResponse></ae:DeleteProcessAppResponse>
```

The process app is deleted. Failure will not delete the process app.

Usage

This call permanently deletes the process app that you specify.



Note: DeleteProcessApp not only deletes the specified process app, but also all the data in that process app. All tables defined by the process app and all data in those tables is permanently deleted. Since the data cannot be recovered, you should consider performing a backup of your database prior to deleting the process app.

Faults

- Invalid database pointer.
- The process app name is not valid.
- The user lacks sufficient permission.
- The delete process app fails to execute.

XML

The following XML is a snippet of the payload being sent with DeleteProcessApp.

```
<urn:DeleteProcessApp>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:processAppName>Incident Management</urn:processAppName>
  <urn:options></urn:options>
</urn:DeleteProcessApp>
```

GetGroupMembers

Description

This service returns a list of users who are members of one or more specified groups.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
group	GroupIdentifierEx [page 327]	Used to specify one or more group identifiers.

Response

One or more [GroupMembersHolder \[page 369\]](#) responses are returned. The users are returned in the context of the specified group. For more information, see [GroupMembersHolder \[page 369\]](#).

Usage

The `<urn:group>` parameter uniquely identifies the group.

You must have administrative privileges to execute this call and return results.

Faults

- An empty groups list was passed
- The specified group id or name *<input value>* does not exist. (Appears if an invalid group identifier is specified)
- User *<name>* does not have privilege to view group 'any'

XML

The following XML is a snippet of the payload that is sent with `GetGroupMembers`.

```
<urn:GetGroupMembers>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:id>
      <urn:displayName>IDM Manager</urn:displayName>
    </urn:id>
  </urn:group>
</urn:GetGroupMembers>
```

GetGroups

Description

This services returns one or more existing groups.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The <code>userId</code> and <code>password</code> can be specified with HTTP BASIC or WS-SECURITY instead.
searchByName	string	Used to specify the name of the group as a search parameter.

Argument	Type	Description
group (required)	GroupIdentifier [page 327]	The group or groups that you wish to return.
options	MultipleOptions [page 357]	Holds name value pairing for future elements and enumeration to determine if the service should stop on failure and send an error message or continue processing.

Response

GroupHolder is returned. The GroupHolder response contains the GroupIdentifier and additional information about the group. For more specific information, see [GroupHolder](#) [page 368].

Usage

The GetGroups call is useful when you need data about a group. The GetGroups call retrieves data for a group as it exists in the TS_GROUPS table of the database. To retrieve information for a given user account, use [GetUsers](#) [page 286].

Use the following arguments to determine which groups are returned in the response:

- **searchByName** – Enables you to enter a single string to return groups. For example, if you enter Engineer as the searchByName value, groups with following display names are returned: Engineers, Engineering, EngineerExperts. You can not enter multiple strings.



Note: To return all user records in the database, do not provide a value for searchByName, and do not enter specific GroupIdentifiers in the group argument. If you have a large number of groups in your database, consider limiting the return data using one or more arguments.

- **group** – Enables you to specify one or more specific groups to be returned. If you want to return multiple groups, you must specify each desired group by providing the GroupIdentifier in a list of multiple group arguments. The group argument takes precedence over the searchByName argument.

Faults

- Invalid database pointer.
- The group ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with GetGroups.

```
<urn:GetGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
```

```

    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:searchByName></urn:searchByName>
  <urn:group>
    <urn:displayName>CR Submitters</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:group>
  <urn:group>
    <urn:displayName>IDM Team</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:group>
  <urn:options>
    <urn:multiOption></urn:multiOption>
  </urn:options>
</urn:GetGroups>

```

In this example, only group names that contain the string "IDM" will be returned:

```

<urn:GetGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:searchByName>IDM</urn:searchByName>
  <urn:group>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:group>
  <urn:options>
    <urn:multiOption></urn:multiOption>
  </urn:options>
</urn:GetGroups>

```

GetGroupPrivileges

Description

This services returns a list of privileges for a specified group.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
privilegeType	string	Indicates the privilege is either a normal user privilege or an administrator privilege. The types of privilege for each are listed below.
objectId (optional)	string	The ID of the object you wish to check privileges against. If provided, privilegeType becomes required.
group	GroupIdentifier [page 327]	Indicates the group for which privileges should be returned.

Response

Privilege is returned. The privileges are returned in the context of the specified group. The privilege name, type, and object UUID (if the privilege applies only to a particular object like a project or table) are returned. For more information, see [Privilege \[page 373\]](#).

Usage

The objectId argument is used to limit the privilege check to a certain database object. For example, if want to query a table privilege, you specify the table ID of the table. If you want to query a project privilege, you specify the project ID. To check for system privileges, send an empty objectId argument. If the object ID is not composed of all numeric digits, the ID is interpreted as the UUID for the object. Note that if this parameter is provided, then the privilegeType argument is required.

If an invalid privilege type or no privilege type is specified at all, the call will succeed, but no privilege information will be returned. The tables below contain the possible privilege types.

The available privilege types for a normal user are:

TS_PRIVTYPE_USERSYS
TS_PRIVTYPE_USERPRJ
TS_PRIVTYPE_USERWKF
TS_PRIVTYPE_USERFLD
TS_PRIVTYPE_USERTBL

The available privilege types for an administrator are:

TS_PRIVTYPE_ADMSYS
TS_PRIVTYPE_ADMPRJ
TS_PRIVTYPE_ADMWKF

TS_PRIVTYPE_ADMFLD_PRJ
TS_PRIVTYPE_ADMFLD_WKF
TS_PRIVTYPE_ADMCON
TS_FLDPRIVTYPE_ADMFLD
TS_FLDPRIVTYPE_ADMGRP
TS_FLDPRIVTYPE_ADMTBL

Faults

- Invalid database pointer.
- The privilege type name is not valid.
- The login ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload that is sent with GetGroupPrivileges.

```
<urn:GetGroupPrivileges>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password>sa</urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:displayName>Everyone</urn:displayName>
  </urn:group>
  <urn:privilegeType>TS_PRIVTYPE_USERSYS</urn:privilegeType>
</urn:GetGroupPrivileges>
```

GetGroupRoles

Description

This services returns a list of roles for a specified group.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
group	GroupIdentifier [page 327]	Indicates the group for which roles should be returned.
project	ProjectIdentifier [page 332]	Indicates the project.

Response

One or more [RoleHolder \[page 377\]](#) responses are returned. The roles are returned in the context of the specified group. The role name, type, and assignment information are returned. For more information, see [RoleHolder \[page 377\]](#).

Usage

The `<urn:group>` parameter uniquely identifies the group. Providing the `<urn:projectId>` value in the `GroupIdentifier` improves performance of the call, especially for the systems with several projects.

If an invalid role or no role is specified at all, the call will succeed, but no role information will be returned.

Faults

- The user lacks sufficient privileges to view the group.

XML

The following XML is a snippet of the payload that is sent with `GetGroupRoles`.

```
<urn:GetGroupRoles>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:displayName>IDM View Only</urn:displayName>
  </urn:group>
  <urn:project>
    <urn:displayName>IDM Project</urn:displayName>
  </urn:project>
</urn:GetGroupRoles>
```

GetRoleGroups

Description

This services returns a list of groups that are granted a particular role in a specified project.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
role	RoleIdentifier [page 334]	Indicates the role that is used to find groups.
options	MultipleOptions [page 357]	Holds name value pairing for future elements and enumeration to determine if the service should stop on failure and send an error message, or continue processing.

Response

GroupHolder is returned. The GroupHolder response contains the GroupIdentifier and additional information about the group. For more specific information, see [GroupHolder \[page 368\]](#).

Usage

The RoleIdentifier uniquely identifies the role. You must specify a project in the RoleIdentifier in order to return groups. If an invalid role or no role is specified at all, the call will succeed, but no group information will be returned.

Faults

- Invalid parameter passed
- User does not have privileges to view group
- Role not found
- Project not found

XML

The following XML is a snippet of the payload that is sent with GetRoleGroups.

```
<urn:GetRoleGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
  </urn:auth>
  <urn:role>
    <urn:displayName>IM Manager</urn:displayName>
    <urn:projectId>
      <urn:displayName>IM Project</urn:displayName>
    </urn:projectId>
  </urn:role>
  <urn:options>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  </urn:options>
</urn:GetRoleGroups>
```

```
</urn:options>  
</urn:GetRoleGroups>
```

GetRoleUsers

Description

This services returns a list of users that are granted a particular role in a specified project.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
role	RoleIdentifier [page 334]	Indicates the role that is used to find users.
options	UserResponseOptions [page 365]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

UserHolder is returned. The UserHolder response contains one or more UserIdentifiers and additional information from the users preferences. For more specific information, see [UserHolder \[page 380\]](#).

Usage

The RoleIdentifier uniquely identifies the role. You must specify a project in the RoleIdentifier in order to return users. If an invalid role or no role is specified at all, the call will succeed, but no user information will be returned.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all users have been processed.
- **sections** and **specifiedSections** – Enables you to specify which parts of a user record should be returned. This allows you to limit the data that is returned for a given user. The sections that aren't specified are not included in the response. For example, if you only need basic user information in the response, use the sections parameter to return only the STANDARD section.

For more information on the options elements, see [UserResponseOptions \[page 365\]](#).

Faults

- Invalid parameter passed
- User does not have privileges to view user
- Role not found
- Project not found

XML

The following XML is a snippet of the payload that is sent with GetRoleUsers.

```
<urn:GetRoleUsers>
  <urn:auth>
    <urn:userId>admin</urn:userId>
  </urn:auth>
  <urn:role>
    <urn:displayName>IM Manager</urn:displayName>
    <urn:projectId>
      <urn:displayName>IM Project</urn:displayName>
    </urn:projectId>
  </urn:role>
  <urn:options>
    <urn:sections>SECTIONS-NONE</urn:sections>
  </urn:options>
</urn:GetRoleUsers>
```

GetPrivilegeTypes

Description

This services returns the list of available privilege types.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
kind	PrivilegeKind [page 332]	Determines if the privilege type is USER-KIND or ADMIN-KIND.

Response

A list of privilege types are returned, depending on the `<urn:kind>` you specify. For more information, see [PrivilegeKind \[page 332\]](#).

Usage

Use the types returned in GetPrivilegeTypes with the GetTypePrivileges call to return a list of privileges that exist for each privilege type.

The available privilege types for a normal user are:

TS_PRIVTYPE_USERSYS
TS_PRIVTYPE_USERPRJ
TS_PRIVTYPE_USERWKF
TS_PRIVTYPE_USERFLD
TS_PRIVTYPE_USERTBL

The available privilege types for an administrator are:

TS_PRIVTYPE_ADMSYS
TS_PRIVTYPE_ADMPRJ
TS_PRIVTYPE_ADMWKF
TS_PRIVTYPE_ADMFLD_PRJ
TS_PRIVTYPE_ADMFLD_WKF
TS_PRIVTYPE_ADMCON
TS_FLDPRIVTYPE_ADMFLD
TS_FLDPRIVTYPE_ADMGRP
TS_FLDPRIVTYPE_ADMTBL

Faults

- None.

XML

The following XML is a snippet of the payload that is sent with GetPrivilegeTypes.

```
<urn:GetPrivilegeTypes>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:kind>ADMIN-KIND</urn:kind>
</urn:GetPrivilegeTypes>
```

The response:

```

<ae:GetPrivilegeTypesResponse>
  <ae:return>TS_PRIVTYPE_ADMSYS</ae:return>
  <ae:return>TS_PRIVTYPE_ADMPRJ</ae:return>
  <ae:return>TS_PRIVTYPE_ADMWKF</ae:return>
  <ae:return>TS_PRIVTYPE_ADMFLD_PRJ</ae:return>
  <ae:return>TS_PRIVTYPE_ADMFLD_WKF</ae:return>
  <ae:return>TS_FLDPRIVTYPE_ADMFLD</ae:return>
  <ae:return>TS_FLDPRIVTYPE_ADMGRP</ae:return>
  <ae:return>TS_FLDPRIVTYPE_ADMTBL</ae:return>
  <ae:return>TS_PRIVTYPE_ADMCON</ae:return>
</ae:GetPrivilegeTypesResponse>

```

GetTypePrivileges

Description

This services returns the list of privileges by type.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
privilegeType	string	Filters the privilege by type.

Response

A list of privilege types are returned, depending on the `<urn:kind>` you specify. For more information, see [PrivilegeKind \[page 332\]](#).

Usage

Use the types returned in [GetPrivilegeTypes \[page 282\]](#) call to return a list of privileges that exist for each privilege type. Only privilege type names returned by `GetPrivilegeTypes` are considered as valid values for the `<urn:privilegeType>` parameter.

No privileges are returned for the `TS_FLDPRIVTYPE_ADMGRP` and `TS_FLDPRIVTYPE_ADMTBL` administrative types; therefore, these types should be used alone to create unique `PrivilegeIdentifiers`.



Note: Different lists of privileges might be returned for a given type in different versions of SBM.

Faults

- None.

XML

The following XML is a snippet of the payload that is sent with `GetTypePrivileges`.

```

<urn:GetTypePrivileges>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:privilegeType>TS_PRIVTYPE_USERFLD</urn:privilegeType>
</urn:GetTypePrivileges>

```

The response:

```

<ae:GetTypePrivilegesResponse>
  <ae:return>TS_USRFLDPRIV_VIEWFOLDERITEMS</ae:return>
  <ae:return>TS_USRFLDPRIV_ADDTOFOLDER</ae:return>
  <ae:return>TS_USRFLDPRIV_REMOVEFROMFOLDER</ae:return>
</ae:GetTypePrivilegesResponse>

```

GetUserRoles

Description

This services returns a list of roles for a specified user.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
user	UserIdentifier [page 339]	Indicates the user for which roles should be returned.
project	ProjectIdentifier [page 332]	Indicates the project.

Response

One or more [RoleHolder \[page 377\]](#) responses are returned. The roles are returned in the context of the specified user. The role name, type, and assignment information are returned. For more information, see [RoleHolder \[page 377\]](#).

Usage

The `<urn:user>` parameter uniquely identifies the user. Providing the `<urn:project>` value improves performance of the call, especially for the systems with several projects.

If an invalid role or no role is specified at all, the call will succeed, but no role information will be returned.

Faults

- The user lacks sufficient privileges to view another user.

XML

The following XML is a snippet of the payload that is sent with GetUserRoles.

```
<urn:GetUserRoles>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:user>
    <urn:loginId>john</urn:loginId>
  </urn:user>
  <urn:project>
    <urn:displayName>IM Project</urn:displayName>
  </urn:project>
</urn:GetUserRoles>
```

GetUsers

Description

This service returns one or more users.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
getCurrentUser	boolean	Specify true to return user info for the user specified in the auth argument of the GetUsers call. Specify false to use the other arguments to return users instead. Default value is false.
searchByName	string	Used to specify the name of the user as a search parameter.
user	UserIdentifier [page 339]	Used to return a specific user or list of users. Specify multiple UserIdentifiers to return multiple users.

Argument	Type	Description
options	UserResponseOptions [page 365]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

UserHolder is returned. The UserHolder response contains one or more UserIdentifiers and additional information from the users preferences. For more specific information, see [UserHolder \[page 380\]](#).

Usage

The GetUsers call is useful when you need data about a user account. The GetUsers call retrieves data for a user account as it exists in the TS_USERS table of the database. To retrieve privileges for a given user account, use [GetUserPrivileges \[page 289\]](#). To determine if a specific user has a given privilege, use [HasUserPrivilege \[page 294\]](#).

Use the following arguments to determine which users are returned in the response:

- **getCurrentUser** – Enables you to specify whether the service should only return user information for the user that is making the call. If you set getCurrentUser to true, the current user is returned, regardless of the data sent in the searchByName and user arguments.
- **searchByName** – Enables you to enter a single string to return user accounts. For example, if you enter Joe as the searchByName value, user records with following display names are returned: Joe, Joel, Joey. You can not enter multiple strings. The searchByName argument is ignored if getCurrentUser is set to true or if a UserIdentifier is specified in the user argument.



Note: To return all user records in the database, leave getCurrentUser set to false, do not provide a value for searchByName, and do not enter specific UserIdentifiers in the user argument. If you have a large number of users in your database, consider limiting the return data using one or more arguments.

- **user** – Enables you to specify one or more specific user accounts to be returned. If you want to return multiple users, you must specify each desired user by providing the UserIdentifier in a list of multiple user arguments. The user argument takes precedence over the searchByName argument.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all users have been processed.
- **sections** and **specifiedSections** – Enables you to specify which parts of a user record should be returned. This allows you to limit the data that is returned for a given user. The sections that aren't specified are not included in the response. For

example, if you only need basic user information in the response, use the sections parameter to return only the STANDARD section.

For more information on the options elements, see [UserResponseOptions \[page 365\]](#).

Faults

- Invalid database pointer.
- The user ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with `GetUsers`. In this example, `searchByName` is used to find all users with the string `Joe` in the user login ID.

```
<urn:GetUsers>
  <urn:auth>
    <urn:userId>Admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:getCurrentUser></urn:getCurrentUser>
  <urn:searchByName>Joe</urn:searchByName>
  <urn:user>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:GetUsers>
```

In this example, `getCurrentUser` is empty (or false), `searchByName` is left empty, and no user is provided in the user argument. This call returns all the users in the system.

```
<urn:GetUsers>
  <urn:auth>
    <urn:userId>Admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:getCurrentUser></urn:getCurrentUser>
  <urn:searchByName></urn:searchByName>
  <urn:user>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:GetUsers>
```

GetUserPrivileges

Description

This services returns a list of privileges for a specified user.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
privilegeType	string	Indicates the privilege is either a normal user privilege or an administrator privilege. The types of privilege for each are listed below.
objectId (optional)	string	The ID of the object you wish to check privileges against. If provided, privilegeType becomes required.
user (optional)	UserIdentifier [page 339]	Indicates the user for which privileges should be returned. If this parameter is not provided, the privilege query is made against the user account that sends the call.

Response

Privilege is returned. The privileges are returned in the context of either the calling user or the specified user. The privilege name, type, and object UUID (if the privilege applies only to a particular object like a project or table) are returned. For more information, see [Privilege \[page 373\]](#).

Usage

The objectId argument is used to limit the privilege check to a certain database object. For example, if want to query a table privilege, you specify the table ID of the table. If you want to query a project privilege, you specify the project ID. To check for system privileges, send an empty objectId argument. If the object ID is not composed of all numeric digits, the ID is interpreted as the UUID for the object. Note that if this parameter is provided, then the privilegeType argument is required.

If an invalid privilege type or no privilege type is specified at all, the call will succeed, but no privilege information will be returned. The tables below contain the possible privilege types.

The available privilege types for a normal user are:

TS_PRIVTYPE_USERSYS

TS_PRIVTYPE_USERPRJ

TS_PRIVTYPE_USERWKF

TS_PRIVTYPE_USERFLD

TS_PRIVTYPE_USERTBL

The available privilege types for an administrator are:

TS_PRIVTYPE_ADMSYS

TS_PRIVTYPE_ADMPRJ

TS_PRIVTYPE_ADMWKF

TS_PRIVTYPE_ADMFLD_PRJ

TS_PRIVTYPE_ADMFLD_WKF

TS_PRIVTYPE_ADMCON

TS_FLDPRIVTYPE_ADMFLD

TS_FLDPRIVTYPE_ADMGRP

TS_FLDPRIVTYPE_ADMTBL

Faults

- Invalid database pointer.
- The privilege type name is not valid.
- The login ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload that is sent with GetUserPrivileges.

```
<urn:GetUserPrivileges>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:privilegeType>TS_PRIVTYPE_USERTBL</urn:privilegeType>
  <urn:objectId>1003</urn:objectId>
  <urn:user>
    <urn:displayName>Bill Admin</urn:displayName>
    <urn:id></urn:id>
```

```
        <urn:uuid></urn:uuid>
        <urn:loginId></urn:loginId>
    </urn:user>
</urn:GetUserPrivileges>
```

Another example:

```
<urn:GetUserPrivileges>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:privilegeType>TS_PRIVTYPE_ADMCON</urn:privilegeType>
  <urn:objectId></urn:objectId>
  <urn:user>
    <urn:displayName>Bill Admin</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:GetUserPrivileges>
```

GetVersion

Description

This service returns the SBM version number.

Arguments

None.

Response

A string is returned, showing the version number. For example:

```
<ae:GetVersionResponse>
  <ae:return>Version 2010 R1.200</ae:return>
</ae:GetVersionResponse>
```

Usage

None.

Faults

None.

XML

The following XML shows the payload that is sent with GetVersion.

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:urn="urn:sbmappservices72">
  <soap:Header/>
```

```

<soap:Body>
  <urn:GetVersion/>
</soap:Body>
</soap:Envelope>

```

HasGroupPrivilege

Description

This service checks for a specified privilege by name.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
privilegeName (required)	string	Name of the privilege (for example, "TS_USRSYSPRIV_APIACCESS").
objectId	string	The ID of the object to check privileges against.
user	GroupIdentifier [page 327]	The group to check privileges against.
options	Options [page 360]	Holds name value pairing for future arguments.

Response

A boolean is returned, showing whether the group has the privilege (true) or not (false). The privilege is checked in the context of the specified group. For example:

```

<ae:HasGroupPrivilegeResponse>
  <ae:return>true</ae:return>
</ae:HasGroupPrivilegeResponse>

```

Usage

You can call [GetGroupPrivileges \[page 276\]](#) for the administrator account or for a user account (assuming it has all privileges) to return the name of every privilege. You can then use these privilege names in the `HasGroupPrivilege` call.

The `objectId` argument is used to limit the privilege check to a certain database object. For example, if want to query a table privilege, you specify the table ID of the table. If want to query a project privilege, you specify the project ID. To check for system privileges, send an empty `objectID` argument.

Faults

- Invalid database pointer.
- The privilege name is not valid.
- The login ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with HasGroupPrivilege.

```
<urn:HasGroupPrivilege>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:privilegeName>TS_ADMSYSPRIV_GLOBALADMIN</urn:privilegeName>
  <urn:group>
    <urn:displayName>IM Administrator</urn:displayName>
  </urn:group>
</urn:HasGroupPrivilege>
```

HasGroupRole

Description

This service checks for a specified role by name.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
group	GroupIdentifier [page 327]	The group to check against.
role	RoleIdentifier [page 334]	The role to verify.

Response

A boolean is returned, showing whether the group has the role (true) or not (false). Either inherited or explicitly granted roles are taken into account. The role is checked in the context of the specified group. For example:

```
<ae:HasGroupRoleResponse>
  <ae:return>>true</ae:return>
</ae:HasGroupRoleResponse>
```

Usage

You can call [GetGroupRoles \[page 278\]](#) for a group to return a list of available roles. You can then use these roles in the HasGroupRole call.

The `<urn:group>` and `<urn:role>` parameters uniquely identify the group and role. Providing the `<urn:projectId>` value in the GroupIdentifier improves performance of the call, especially for the systems with several projects.

Faults

- Role not found.
- Project not found.
- The user lacks sufficient privileges to view the group.

XML

The following XML is a snippet of the payload this is sent with HasGroupRole.

```
<urn:HasGroupRole>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:displayName>IDM View Only</urn:displayName>
  </urn:group>
  <urn:role>
    <urn:displayName>IDM Manager</urn:displayName>
    <urn:projectId>
      <urn:displayName>IDM Project</urn:displayName>
    </urn:projectId>
  </urn:role>
</urn:HasGroupRole>
```

HasUserPrivilege

Description

This service checks for a specified privilege by name.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
privilegeName (required)	string	name of the privilege (for example, "TS_USRSYSPRIV_APIACCESS")
objectId (optional)	string	The ID of the object to check privileges against.
user	UserIdentifier [page 339]	The user to check privileges against.
options	Options [page 360]	Holds name value pairing for future arguments.

Response

A boolean is returned, showing whether the user has the privilege (true) or not (false). The privilege is checked in the context of either the calling user or the specified user. For example:

```
<ae:HasUserPrivilegeResponse>  
  <ae:return>true</ae:return>  
</ae:HasUserPrivilegeResponse>
```

Usage

You can call [GetUserPrivileges \[page 289\]](#) for the administrator account or for a user account (assuming it has all privileges) to return the name of every privilege. You can then use these privilege names in the *HasUserPrivilege* call to determine if other users have the same privilege.

The *objectId* argument is used to limit the privilege check to a certain database object. For example, if want to query a table privilege, you specify the table ID of the table. If want to query a project privilege, you specify the project ID. To check for system privileges, send an empty *objectId* argument. If the object ID is not composed of all numeric digits, the ID is interpreted as the UUID for the object.

Faults

- Invalid database pointer.
- The privilege name is not valid.
- The login ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with HasUserPrivilege.

```
<urn:HasUserPrivilege>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:privilegeName>TS_ADMCONPRIV_DEPLOY_APPLICATION</urn:privilegeName>
  <urn:objectId></urn:objectId>
  <urn:user>
    <urn:displayName>Joe</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:HasUserPrivilege>
```

HasUserRole

Description

This service checks for a specified role by name.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The <i>Auth</i> type supplies credentials and optionally, a host name for licensing. The <i>userId</i> and <i>password</i> can be specified with HTTP BASIC or WS-SECURITY instead.
user	UserIdentifier [page 339]	The user to check against.
role	RoleIdentifier [page 334]	The role to verify.

Response

A boolean is returned, showing whether the user is granted the role in the project (true) or not (false). Either inherited or explicitly granted roles are taken into account. The role is checked in the context of the specified user. For example:

```
<ae:HasUserRoleResponse>
  <ae:return>true</ae:return>
</ae:HasUserRoleResponse>
```

Usage

You can call [GetUserRoles](#) [page 285] for a group to return a list of available roles. You can then use these roles in the HasUserRole call.

The `<urn:user>` and `<urn:role>` parameters uniquely identify the user and role. Providing the `<urn:projectId>` value in the `GroupIdentifier` improves performance of the call, especially for the systems with several projects.

Faults

- Role not found.
- Project not found.
- The user lacks sufficient privileges to view another user.

XML

The following XML is a snippet of the payload this is sent with `HasUserRole`.

```
<urn:HasUserRole>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:user>
    <urn:loginId>joe</urn:loginId>
  </urn:user>
  <urn:role>
    <urn:displayName>CR Business Analysts</urn:displayName>
    <urn:projectId>
      <urn:displayName>Change Approval Request Project</urn:displayName>
    </urn:projectId>
  </urn:role>
</urn:HasUserRole>
```

IsUserValid

Description

This service determines whether a specified user is valid.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The <code>userId</code> and <code>password</code> can be specified with HTTP BASIC or WS-SECURITY instead.
user (optional)	UserIdentifier [page 339]	The user to be checked.

Response

A boolean is returned, showing whether the user is valid (true) or not (false). The user account is checked in the context of either the calling user or the specified user. For example:

```
<ae:IsUserValidResponse>
  <ae:return>true</ae:return>
</ae:IsUserValidResponse>
```

Usage

IsUserValid will return true if the specified user was found in the database and is not deleted or disabled. Otherwise false is returned.

Faults

- Invalid database pointer.
- The login ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with IsUserValid.

```
<urn:IsUserValid>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:user>
    <urn:displayName>carmen</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId></urn:loginId>
  </urn:user>
</urn:IsUserValid>
```

Logout

Description

This service releases any licenses and resources associated with the session.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.

Argument	Type	Description
options	Options [page 360]	Holds name value pairing for future arguments.

Response

An empty XML response is returned:

```
<ae:LogoutResponse/>
```

The session is ended. Failure will keep the session open.

Usage

The Logout call logs out the user from the current active session. There is no effect if previous Web service calls are not made before Logout is called.

Faults

- Authentication error if invalid credentials.

XML

The following XML is a snippet of the payload that is sent with Logout.

```
<urn:Logout>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
</urn:Logout>
```

SetGroupPrivileges

Description

This services sets or revokes privileges for a specified group.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
group	GroupIdentifier [page 327]	Indicates the group for which privileges should be set or revoked.

Argument	Type	Description
privilege	PrivilegeInfo [page 360]	Indicates the name and assignment information for a privilege.

Response


One or more PrivilegeHolder responses are returned. The privileges are returned in the context of the specified group. The privilege name, type, access information, and objectId (if the privilege applies only to a particular object like a project or table) are returned. For more information, see [PrivilegeHolder \[page 374\]](#).

Usage

This call enables you to grant or revoke one or more privileges for a group. Use the [GetPrivilegeTypes \[page 282\]](#) and [GetTypePrivileges \[page 284\]](#) calls to get available privilege types and privilege names.

If a privilege is specified, but no access information is sent, the privilege is automatically set to `REVOKED`. To successfully grant or revoke a privilege, you must supply the privilege's corresponding object unless specified otherwise.



The following table lists the available user privilege types and their corresponding objects. (Send any of the following privilege types using [GetTypePrivileges \[page 284\]](#) to return the type's associated privileges).

Privilege Type	Associated objectId
TS_PRIVTYPE_USERPRJ	<p>Project – To grant groups project-type privileges, you must include the project <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p> <p> Tip: You do not send project information using the <code>privilege.projectId</code> element. Use one of the <code>objectId</code> parameters instead.</p>
TS_PRIVTYPE_USERWKF	<p>Workflow – Not used. There are no workflow-based privileges for users that you can grant or revoke in SBM.</p>
TS_PRIVTYPE_USERFLD	<p>Folder – To grant groups folder-type privileges, you must include the folder <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p>
TS_PRIVTYPE_USERTBL	<p>Table – To grant groups table-type privileges, you must include the table <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p>
TS_PRIVTYPE_USERSYS	<p>System – Not bound to a specific object, so <code>objectId</code> parameters can be empty.</p>

The following table lists the available administrator privilege types and their corresponding objects. (Send any of the following privilege types using [GetTypePrivileges \[page 284\]](#) to return the type's associated privileges).



Note: Administrator privileges can only be granted to groups with Managed Administrator access.

Privilege Type	Associated objectId
TS_PRIVTYPE_ADMSYS	System – Not bound to a specific object, so objectId parameters can be empty.
TS_PRIVTYPE_ADMPRJ	<p>Project – To grant groups administrative project-type privileges, you must include the project <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p> <p> Tip: You do not send project information using the <code>privilege.projectId</code> element. Use one of the <code>objectId</code> parameters instead.</p>
TS_PRIVTYPE_ADMWKF	Workflow – To grant groups administrative workflow-type privileges, you must include the workflow <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.
TS_PRIVTYPE_ADMFLD_PRJ	Override Ordering for Default Fields – To grant groups administrative override-type privileges for fields in projects, you must include the project <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.
TS_PRIVTYPE_ADMFLD_WKF	Workflow – Not used. There are no workflow-based field privileges for administrators that you can grant or revoke in SBM.
TS_FLDPRIVTYPE_ADMFLD	<p>Field – To grant groups administrative field-type privileges, you must include the field <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p> <p> Important: You must include a project value in <code>projectId</code> in order to identify the correct field in the correct project.</p>
TS_FLDPRIVTYPE_ADMGRP	Group – To grant groups administrative group-type privileges, you must include the group <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.

Privilege Type	Associated objectId
TS_FLDPRIVTYPE_ADMTBL	Table – To grant groups administrative table-type privileges, you must include the table <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.
TS_PRIVTYPE_ADMCON	Deployment – Not bound to a specific object, so <code>objectId</code> parameters can be empty.

Faults

- An invalid parameter was passed.
- Privilege type '`<privilege type name>`' was not found. Use the `GetPrivilegeTypes` call to get the most current list of privilege types.
- The `<user|group>` is not a Managed Administrator; therefore, the user cannot be assigned administrative privileges.
- An `objectId` of existing `<project|table|folder|workflow|group|field>` type is needed for the '`<privilege type name>`' privilege type.
- Project not found for `TS_FLDPRIVTYPE_ADMFLD` privilege.

XML

The following XML is a snippet of the payload that is sent with `SetGroupPrivileges`.

```
<urn:SetGroupPrivileges>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:displayName>Everyone</urn:displayName>
  </urn:group>
  <urn:privilege>
    <urn:privilegeId>
      <urn:name>TS_USRPRJPRIV_DELETE</urn:name>
    </urn:privilegeId>
    <urn:access>GRANTED</urn:access>
    <urn:objectId>
      <urn:displayName>IM Project</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:objectId>
  </urn:privilege>
</urn:SetGroupPrivileges>
```

SetGroupRoles

Description

This services sets or revokes roles for a specified group.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
group	GroupIdentifier [page 327]	Indicates the group for which roles should be set or revoked.
role	RoleInfo [page 361]	Indicates the name and assignment information for a role.

Response

One or more RoleHolder responses are returned. The roles are returned in the context of the specified group. The role name, project, and access information are returned. For more information, see [RoleHolder \[page 377\]](#).

Usage

This call enables you to set one or more roles for a group. Roles might be granted, revoked, or inherited according to the `<urn:access>` parameter; however, this service only manages explicit group roles without affecting the role inheritance tree. When a role is explicitly revoked for a particular project, the group nevertheless might still have that role due to inheritance from the upper-level project. To check the actual state of role availability for a particular group, use the [HasGroupRole \[page 293\]](#) or [GetGroupRoles \[page 278\]](#) calls.

If an invalid role or no role is specified, the call will succeed, but no role information will be returned.

Faults

- The user lacks sufficient permission to update role assignee.
- Project not found.
- Role not found.

XML

The following XML is a snippet of the payload that is sent with SetGroupRoles.

```
<urn:SetGroupRoles>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
```

```

    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:displayName>IDM View Only</urn:displayName>
  </urn:group>
  <urn:role>
    <urn:id>
      <urn:displayName>IDM Team</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
    <urn:access>GRANTED</urn:access>
  </urn:role>
  <urn:role>
    <urn:id>
      <urn:displayName>IDM Administrator</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
    <urn:access>INHERITED</urn:access>
  </urn:role>
</urn:SetGroupRoles>

```

SetUserPrivileges

Description

This services sets or revokes privileges for a specified user.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
user (optional)	UserIdentifier [page 339]	Indicates the user for which privileges should be set or revoked. If this parameter is not provided, the privilege is set against the user account that sends the call.
privilege	PrivilegeInfo [page 360]	Indicates the name and assignment information for a privilege.

Response


One or more PrivilegeHolder responses are returned. The privileges are returned in the context of either the calling user or the specified user. The privilege name, type, access information, and objectId (if the privilege applies only to a particular object like a project or table) are returned. For more information, see [PrivilegeHolder](#) [page 374].

Usage

This call enables you to set one or more privileges for a user. Use the [GetPrivilegeTypes \[page 282\]](#) and [GetTypePrivileges \[page 284\]](#) calls to get available privilege types and privilege names.

If a privilege is specified, but no access information is sent, the privilege is automatically set to `REVOKED`. To successfully grant or revoke a privilege, you must supply the privilege's corresponding object unless specified otherwise.



The following table lists the available user privilege types and their corresponding objects. (Send any of the following privilege types using [GetTypePrivileges \[page 284\]](#) to return the type's associated privileges).

Privilege Type	Associated objectId
TS_PRIVTYPE_USERPRJ	<p>Project – To grant groups project-type privileges, you must include the project <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p> <p> Tip: You do not send project information using the <code>privilege.projectId</code> element. Use one of the <code>objectId</code> parameters instead.</p>
TS_PRIVTYPE_USERWKF	<p>Workflow – Not used. There are no workflow-based privileges for users that you can grant or revoke in SBM.</p>
TS_PRIVTYPE_USERFLD	<p>Folder – To grant groups folder-type privileges, you must include the folder <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p>
TS_PRIVTYPE_USERTBL	<p>Table – To grant groups table-type privileges, you must include the table <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p>
TS_PRIVTYPE_USERSYS	<p>System – Not bound to a specific object, so <code>objectId</code> parameters can be empty.</p>

The following table lists the available administrator privilege types and their corresponding objects. (Send any of the following privilege types using [GetTypePrivileges \[page 284\]](#) to return the type's associated privileges).



Note: Administrator privileges can only be granted to groups with Managed Administrator access.

Privilege Type	Associated objectId
TS_PRIVTYPE_ADMSYS	System – Not bound to a specific object, so objectId parameters can be empty.
TS_PRIVTYPE_ADMPRJ	<p>Project – To grant groups administrative project-type privileges, you must include the project <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p> <p> Tip: You do not send project information using the <code>privilege.projectId</code> element. Use one of the <code>objectId</code> parameters instead.</p>
TS_PRIVTYPE_ADMWKF	Workflow – To grant groups administrative workflow-type privileges, you must include the workflow <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.
TS_PRIVTYPE_ADMFLD_PRJ	Override Ordering for Default Fields – To grant groups administrative override-type privileges for fields in projects, you must include the project <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.
TS_PRIVTYPE_ADMFLD_WKF	Workflow – Not used. There are no workflow-based field privileges for administrators that you can grant or revoke in SBM.
TS_FLDPRIVTYPE_ADMFLD	<p>Field – To grant groups administrative field-type privileges, you must include the field <code>displayName</code>, <code>id</code>, or <code>uuid</code> in the <code><urn:objectId></code> argument.</p> <p> Important: You must include a project value in <code>projectId</code> in order to identify the correct field in the correct project.</p>
TS_FLDPRIVTYPE_ADMGRP	Group – To grant groups administrative group-type privileges, you must include the group <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.
TS_FLDPRIVTYPE_ADMTBL	Table – To grant groups administrative table-type privileges, you must include the table <code>displayName</code> , <code>id</code> , or <code>uuid</code> in the <code><urn:objectId></code> argument.
TS_PRIVTYPE_ADMCON	Deployment – Not bound to a specific object, so objectId parameters can be empty.

Faults

- An invalid parameter was passed.
- Privilege type '<privilege type name>' was not found. Use the GetPrivilegeTypes call to get the most current list of privilege types.
- The <user|group> is not a Managed Administrator; therefore, the user cannot be assigned administrative privileges.
- An objectId of existing <project|table|folder|workflow|group|field> type is needed for the '<privilege type name>' privilege type.
- Project not found for TS_FLDPRIVTYPE_ADMFLD privilege.

XML

The following XML is a snippet of the payload that is sent with SetUserPrivileges.

```
<urn:SetUserPrivileges>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:user>
    <urn:loginId>john</urn:loginId>
  </urn:user>
  <urn:privilege>
    <urn:privilegeId>
      <urn:name>TS_USRSYSPRIV_LOGONASUSER</urn:name>
    </urn:privilegeId>
    <urn:access>GRANTED</urn:access>
  </urn:privilege>
</urn:SetUserPrivileges>
```

SetUserRoles

Description

This services sets or revokes roles for a specified user.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
user	UserIdentifier [page 339]	Indicates the user for which roles should be set or revoked.

Argument	Type	Description
role	RoleInfo [page 361]	Indicates the name and assignment information for a role.

Response

One or more RoleHolder responses are returned. The roles are returned in the context of the specified user. The role name, project, and access information are returned. For more information, see [RoleHolder](#) [\[page 377\]](#).

Usage

This call enables you to set one or more roles for a user. Roles might be granted, revoked, or inherited according to the `<urn:access>` parameter; however, this service only manages explicit user roles without affecting the role inheritance tree. When a role is explicitly revoked for a particular project, the user nevertheless might still have that role due to inheritance from the upper-level project. To check the actual state of role availability for a particular user, use the [HasUserRole](#) [\[page 296\]](#) or [GetUserRoles](#) [\[page 285\]](#) calls.

If an invalid role or no role is specified, the call will succeed, but no role information will be returned.

Faults

- The user lacks sufficient permission to update role assignee.
- Project not found.
- Role not found.

XML

The following XML is a snippet of the payload that is sent with SetUserRoles.

```
<urn:SetUserRoles>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:user>
    <urn:loginId>john</urn:loginId>
  </urn:user>
  <urn:role>
    <urn:id>
      <urn:displayName>IDM Team</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
    <urn:access>GRANTED</urn:access>
  </urn:role>
  <urn:role>
```

```

    <urn:id>
      <urn:displayName>IDM Administrator</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
    <urn:access>REVOKED</urn:access>
  </urn:role>
</urn:SetUserRoles>

```

UpdateGroups

Description

This services updates one or more existing groups.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
allowEmptyValues	boolean	Specify true in order to honor empty values that are sent in the group argument. (This removes the current value that is specified on the group account). Default is false.
group (required)	GroupInfo [page 325]	Used to identify a specific group or list of groups for update. Specify multiple group arguments to update multiple groups.
options	MultipleOptions [page 357]	Holds name value pairing for future elements and enumeration to determine if the service should stop on failure and send an error message or continue processing.

Response

GroupHolder is returned. The GroupHolder response contains one or more GroupIdentifiers and additional information from the groups record. For more specific information, see [GroupHolder \[page 368\]](#).

Usage

Use the UpdateGroups call when you need to update one or more groups in SBM. Use the following arguments to handle how groups are updated by the service:

- **allowEmptyValues** – Enables you to send an empty value in the group argument that is honored by the update. For example, if you need to remove the memo for one or more groups, set allowEmptyValues to true and send an empty value in the group

element of each group argument you send. The default value is false, which means that empty values in the group argument are not honored.

CAUTION:

Use care when updating existing group accounts. Important group information might be mistakenly altered or removed if an existing group match is found and the group parameters you send are incorrect or empty. For example, to delete the memo for one or more groups, do not just clear the memo value and set allowEmptyValues to true. This will remove all the other group settings including the product access (which will be set to None if you send an empty value). When you want to clear values using allowEmptyValues, you must also provide values for elements in GroupInfo that you want to preserve

- **group** – Enables you to specify one or more specific group accounts to be updated. If you want to update multiple groups, you must specify each desired group by providing the GroupIdentifier in a list of multiple group arguments. To delete groups, specify true in the isDeleted element of the group argument.

Faults

- Invalid database pointer.
- The user ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with UpdateGroups.

```
<urn:UpdateGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:allowEmptyValues>false</urn:allowEmptyValues>
  <urn:group>
    <urn:id>
      <urn:displayName>CR Submitters</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:id>
    <urn:accessType>ACCESS-ADMIN</urn:accessType>
    <urn:memo>Changed this group to admin access.</urn:memo>
    <urn:isDeleted></urn:isDeleted>
  </urn:group>
  <urn:group>
    <urn:id>
      <urn:displayName>IDM Team</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:id>
```

```
    <urn:accessType>ACCESS-USER</urn:accessType>
    <urn:memo>This team has user access now.</urn:memo>
    <urn:isDeleted></urn:isDeleted>
  </urn:group>
  <urn:options>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  </urn:options>
</urn:UpdateGroups>
```

In this example, the current memo is deleted on the CR Submitters group:

```
<urn:UpdateGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:allowEmptyValues>>true</urn:allowEmptyValues>
  <urn:group>
    <urn:id>
      <urn:displayName>CR Submitters</urn:displayName>
    </urn:id>
    <urn:accessType>ACCESS-ADMIN</urn:accessType>
    <urn:memo></urn:memo>
    <urn:isDeleted></urn:isDeleted>
  </urn:group>
  <urn:options>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  </urn:options>
</urn:UpdateGroups>
```

In this example, the CR Submitters group is deleted:

```
<urn:UpdateGroups>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:allowEmptyValues>>false</urn:allowEmptyValues>
  <urn:group>
    <urn:id>
      <urn:displayName>CR Submitters</urn:displayName>
    </urn:id>
    <urn:accessType>ACCESS-ADMIN</urn:accessType>
    <urn:memo></urn:memo>
    <urn:isDeleted>>true</urn:isDeleted>
  </urn:group>
  <urn:options>
    <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  </urn:options>
</urn:UpdateGroups>
```

UpdateUsers

Description

This service updates one or more existing users.

Arguments

Argument	Type	Description
auth (optional)	Auth [page 352]	The Auth type supplies credentials and optionally, a host name for licensing. The userId and password can be specified with HTTP BASIC or WS-SECURITY instead.
allowEmptyValues	boolean	Specify true in order to honor empty values that are sent in the user argument. (This removes the current value that is specified on the user account). Default is false.
groupAction	GroupListAction [page 354]	Specifies whether to add, replace, or remove groups.
user (required)	UserInfo [page 341]	Used to identify a specific user or list of users for update. Specify multiple user arguments to update multiple users.
options	UserResponseOptions [page 365]	Specifies whether the service should continue if an error is encountered or stop. Also enables you to limit the data that is returned in the response.

Response

UserHolder is returned. The UserHolder response contains one or more UserIdentifiers and additional information from the users preferences. For more specific information, see [UserHolder \[page 380\]](#).

Usage

Use the UpdateUsers call when you need to update one or more user accounts in SBM. Use the following arguments to handle how users are updated by the service:

- **allowEmptyValues** – Enables you to send an empty value in the user argument that is honored by the update. For example, if you need to remove the e-mail address for one or more users, set allowEmptyValues to true and send an empty value in the phoneNumber element of each user argument you send. The default value is false, which means that empty values in the user argument are not honored.

CAUTION:

Use care when updating existing user accounts. Important user information might be mistakenly altered or removed if an existing user match is found and the user parameters you send are incorrect or empty. For example, to delete the phone number for one or more users, do not just clear the phone number value and set `allowEmptyValues` to `true`. This will remove all the other user preference settings including the product access (which will be set to `None` if you send an empty value). When you want to clear values using `allowEmptyValues`, you must also provide values for elements in `UserInfo` that you want to preserve.

- **groupAction** – Enables you to add, replace, or remove existing group membership for a user account on update. If you specify `ADD-GROUPS`, then the user is added to each group that is specified in the user argument. If you specify `REPLACE-GROUPS`, then each group that is specified in the user argument replaces the current group membership designated for the user. If you specify `REMOVE-GROUPS`, then the user is removed from the groups that are specified in the user argument.
- **user** – Enables you to specify one or more specific user accounts to be updated. If you want to update multiple users, you must specify each desired user by providing the `UserIdentifier` in a list of multiple user arguments. To delete users, specify `true` in the `isDeleted` element of the user argument.

Use the following elements in the options parameter to control how this call is processed and what data is returned:

- **multiOption** – Enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all users have been processed.
- **sections** and **specifiedSections** – Enables you to specify which parts of a user record should be returned. This allows you to limit the data that is returned for a given user. The sections that aren't specified are not included in the response. For example, if you only need basic user information in the response, use the `sections` parameter to return only the `STANDARD` section.

For more information on the options elements, see [UserResponseOptions \[page 365\]](#).

Faults

- Invalid database pointer.
- The user ID is not valid.
- The user lacks sufficient permission.

XML

The following XML is a snippet of the payload this is sent with `UpdateUsers`. This XML shows an update against Nancy's user account. In this example, Nancy is added to the `CR Submitters` group, her preferred application is set to `IDM`, and the tab order is set to begin with `IDM` when she logs in.

```
<urn:UpdateUsers>
  <urn:auth>
    <urn:userId>Admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:allowEmptyValues>>false</urn:allowEmptyValues>
  <urn:groupAction>ADD-GROUPS</urn:groupAction>
  <urn:user>
    <urn:id>
      <urn:displayName>Nancy</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:loginId>Nancy</urn:loginId>
    </urn:id>
    <urn:accessType>ACCESS-USER</urn:accessType>
    <urn:email></urn:email>
    <urn:emailCC></urn:emailCC>
    <urn:timezone></urn:timezone>
    <urn:offsetFromGMT>-25200000</urn:offsetFromGMT>
    <urn:dstSavings>3600000</urn:dstSavings>
    <urn:datePreference>DATE-FORMAT-FROM-LOCALE</urn:datePreference>
    <urn:timePreference>TIME-FORMAT-12HOUR</urn:timePreference>
    <urn:namespaceName></urn:namespaceName>
    <urn:phoneNumber>888-888-8888</urn:phoneNumber>
    <urn:locale>en_US</urn:locale>
    <urn:isDeleted></urn:isDeleted>
    <urn:contact></urn:contact>
    <urn:maxNotes>10</urn:maxNotes>
    <urn:maxChangeHistory>10</urn:maxChangeHistory>
    <urn:maxItemsPerPage>20</urn:maxItemsPerPage>
    <urn:group>
      <urn:displayName>CR Submitters</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:group>
    <urn:fieldsMask>1</urn:fieldsMask>
    <urn:notesMask>4</urn:notesMask>
    <urn:changeHistoryMask>4</urn:changeHistoryMask>
    <urn:browserMask></urn:browserMask>
    <urn:preferredSolution>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:uniqueName></urn:uniqueName>
      <urn:tabName>IDM</urn:tabName>
    </urn:preferredSolution>
    <urn:solutionData>
      <urn:solution>
        <urn:displayName></urn:displayName>
        <urn:id></urn:id>
        <urn:uuid></urn:uuid>
        <urn:uniqueName>ISSUE_DEFECT_MANAGEMENT</urn:uniqueName>
        <urn:tabName>IDM</urn:tabName>
      </urn:solution>
    </urn:solutionData>
  </urn:user>
</urn:UpdateUsers>
```

```

    </urn:solution>
    <urn:homeReport>
      <urn:displayName>Built-In: All Active Items I Own</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:homeReport>
    <urn:preferredProject>
      <urn:displayName>Animation Pro</urn:displayName>
      <urn:id>6</urn:id>
      <urn:uuid></urn:uuid>
      <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
    </urn:preferredProject>
  </urn:solutionData>
  <urn:solutionData>
    <urn:solution>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:uniqueName>INCIDENT_MANAGEMENT</urn:uniqueName>
      <urn:tabName>Incident Mgmt</urn:tabName>
    </urn:solution>
    <urn:homeReport>
      <urn:displayName>Built-In: All Active Items I Own</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:homeReport>
    <urn:preferredProject>
      <urn:displayName>IM Project</urn:displayName>
      <urn:id>3</urn:id>
      <urn:uuid></urn:uuid>
      <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
    </urn:preferredProject>
  </urn:solutionData>
</urn:user>
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption></urn:multiOption>
  <urn:sections>SECTIONS-ALL</urn:sections>
  <urn:specifiedSections></urn:specifiedSections>
</urn:options>
</urn:UpdateUsers>

```

In this example, Nancy and Carmen are removed from the CR Submitters group:

```

<urn:UpdateUsers>
  <urn:auth>
    <urn:userId>Admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>

```

```
<urn:allowEmptyValues>>false</urn:allowEmptyValues>
<urn:groupAction>REMOVE-GROUPS</urn:groupAction>
<urn:user>
  <urn:id>
    <urn:loginId>Nancy</urn:loginId>
  </urn:id>
  <urn:isDeleted></urn:isDeleted>
  <urn:group>
    <urn:displayName>CR Submitters</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:group>
</urn:user>
<urn:user>
  <urn:id>
    <urn:loginId>Carmen</urn:loginId>
  </urn:id>
  <urn:isDeleted></urn:isDeleted>
  <urn:group>
    <urn:displayName>CR Submitters</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:group>
</urn:user>
</urn:UpdateUsers>
```

In this example, the John Doe is deleted from the system:

```
<urn:UpdateUsers>
  <urn:auth>
    <urn:userId>admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:allowEmptyValues>>false</urn:allowEmptyValues>
  <urn:groupAction>ADD-GROUPS</urn:groupAction>
  <urn:user>
    <urn:id>
      <urn:displayName>John Doe</urn:displayName>
      <urn:loginId>JDoe</urn:loginId>
    </urn:id>
    <urn:isDeleted>>true</urn:isDeleted>
```

Common Types

This section provides detailed descriptions of SBM Administrative Web service types that are classified as both arguments and responses. The types listed here contain one or more parameters, which make up the data this is sent to or returned by the Web service. The parameters listed in each type are either simple or complex types themselves. If the parameter is a complex type, click the link in the **Type** column for more detail.

The following table lists all supported common types in alphabetical order, followed by a brief description. Select an argument to view detailed information including:

- **Description** – A brief description of the type.
- **Parameters** – A table that describes the simple and complex types for each common type. For each complex type, click the type name for a detailed description.
- **Usage** – Any notes, additional details, and considerations are addressed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Common Types

Type	Description
AccessType [page 319]	Holds the user's product access type.
ApplicationIdentifier [page 320]	Holds the complete identification information for an application.
Attachment-Access-Type [page 321]	Indicates the type of attachment on an item.
ContactIdentifier [page 322]	Holds the complete identification information for a contact.
DatePreference [page 322]	Indicates a user's preferred date format.
FieldIdentifier [page 323]	Holds the complete identification information for a field.
FileBufferBase64 [page 324]	Holds the binary contents of a file in base64.
GrantState [page 325]	Holds privilege or role assignments for a user.
GroupIdentifier [page 327]	Holds the complete identification information for a group.

Type	Description
GroupIdentifierEx [page 327]	Holds the complete identification information for one or more groups.
GroupInfo [page 325]	Holds the name and additional information about a user.
Identifier [page 328]	Holds generic identification information.
ItemIdentifier [page 329]	Holds the complete identification information for an item.
PrivilegeIdentifier [page 330]	Holds the identification information for a privilege.
PrivilegeKind [page 332]	Holds the type of privilege.
ProjectIdentifier [page 332]	Holds the complete identification information for a project.
ReportIdentifier [page 333]	Holds the complete identification information for a report.
RoleIdentifier [page 334]	Holds the complete identification information for a role.
SolutionIdentifier [page 335]	Holds the complete identification information for a solution.
StateIdentifier [page 336]	Holds the complete identification information for a state.
TableIdentifier [page 337]	Holds the complete identification information for a table.
TimePreference [page 337]	Indicates a user's preferred time format.

Type	Description
TransitionIdentifier [page 338]	Holds the complete identification information for a transition.
UserIdentifier [page 339]	Holds the complete identification information for a user.
UserIdentifierEx [page 340]	Holds the complete identification information for one or more users.
UserInfo [page 341]	Holds the name and additional information about a user.
UserSolutionData [page 348]	Holds an ordered-list of applications that are accessible to a user. Also returns the user's home page report for each application and the preferred project list.
WorkflowIdentifier [page 350]	Holds the complete identification information for a workflow.

AccessType

Description

AccessType indicates the type of product-access a user is granted. The product access is used to determine the possible privileges that are available to users.

Parameters

Name	Type	Description
ACCESS-NONE	string	Indicates that the user's product access is set to None.
ACCESS-USER	string	Indicates Regular User product access.
ACCESS-OCCASIONAL	string	Indicates Occasional User product access.
ACCESS-EXTERNAL	string	Indicates External User product access.
ACCESS-ADMIN	string	Indicates Managed Administrator product access.
ACCESS-APIScript	string	Indicates API/Script product access.

Name	Type	Description
ACCESS-LEAVE-UNCHANGED	string	Do not change the current date product access. Sent by default if not specified.

Usage

The AccessType enumeration indicates the product access that is set for a user. For more information about each product access type, see the *SBM Application Administrator Guide*.

XML

The following XML shows AccessType in the return element of the GetUsers response.

```
<ae:accessType>ACCESS-USER</ae:accessType>
```

ApplicationIdentifier

Description

The ApplicationIdentifier type holds the identification information for an application. The ApplicationIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for an application.

Usage

The ApplicationIdentifier is the identifier that can be used in Web service methods to uniquely identify an application. The ApplicationIdentifier contains the generic information about an application (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML snippet shows ApplicationIdentifier in the return element of a response.

```
<ae:return>
  <ae:application xsi:type="ae:ApplicationIdentifier">
    <ae:displayName>Incident Management</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>955e8e0e-9342-46ed-ba06-d1bfdc1cdf80</ae:uuid>
  </ae:application>
  <ae:description>Provides simple Incident Management
  →functionality for small Support teams.</ae:description>
  <ae:appDefUUID/>
```

```
<ae:revision>2</ae:revision>
</ae:return>
```

Attachment-Access-Type

Description

Attachment-Access-Type indicates the type of attachment on an item. It is used for note, item link, URL, and file attachments. This type is used to determine whether the attachment has a restriction, is unrestricted, or if neither is set.

Parameters

Name	Type	Description
ATTACHACCESS-DEFAULT	string	System default for new attachments that makes the attachment only viewable by user privilege.
ATTACHACCESS-RESTRICTED	string	Explicitly restricts the attachment as specified by user privileges.
ATTACHACCESS-UNRESTRICTED	string	Makes the attachment visible to all users who can view the item.

Usage

You can allow users to specify individual attachments to items as "unrestricted," meaning that anyone with privileges to view the item can also view any of its attachments that are designated as unrestricted. By default, all attachments are restricted based on privileges granted to users.

The UNRESTRICTED status makes the file visible to all users who can view the item. You can set a file to have RESTRICTED status to restrict the file as specified by user privileges. The UNRESTRICTED status is disabled if you do not have privileges to set file attachments as unrestricted for the selected project or auxiliary table.

The RESTRICTED/UNRESTRICTED flag in Attachment-Access-Type sets or clears the same restriction that users can designate when adding attachments in the Web browser. The DEFAULT status is used when neither flag has been set.

XML

The following XML shows Attachment-Access-Type in the `<urn:accessType>` element of a typical call.

```
<urn:attachmentContents>
  <urn:id>16</urn:id>
  <urn:name>pdf_doc</urn:name>
  <urn:fileName>relnotes.pdf</urn:fileName>
  <urn:showAsImage>false</urn:showAsImage>
  <urn:modificationDateTime></urn:modificationDateTime>
  <urn:url></urn:url>
  <urn:accessType>ATTACHACCESS-DEFAULT</urn:accessType>
```

```

<urn:extendedData>
  <urn:data>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:data>
</urn:extendedData>
<urn:contentsBase64></urn:contentsBase64>
</urn:attachmentContents>

```

ContactIdentifier

Description

The ContactIdentifier type holds the identification information for a user's contact record. The ContactIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a contact.

Usage

The ContactIdentifier is the identifier that can be used in Web service methods to uniquely identify a user's contact record. The ContactIdentifier contains the generic information about a contact (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows ContactIdentifier as seen in a typical call.

```

<urn:contact>
  <urn:displayName>Joe Manager</urn:displayName>
  <urn:id>1</urn:id>
  <urn:uuid>69d03cc6-e635-47d8-ab2e-a8be48a22f0a</urn:uuid>
</urn:contact>

```

DatePreference

Description

DatePreference indicates a user's preferred date format. The available options are listed below.

Parameters

Name	Type	Description
DATE-FORMAT-FROM-LOCALE	string	Use the format based on the user's locale.
DATE-FORMAT-MM-DD-YYYY	string	Use a MM-DD-YYYY format for dates.
DATE-FORMAT-DD-MM-YYYY	string	Use a DD-MM-YYYY format for dates.
DATE-FORMAT-DD-MM-YYYY.S	string	Use a DD.MM.YYYY format for dates.
DATE-FORMAT-YYYY-MM-DD	string	Use a YYYY-MM-DD format for dates.
DATE-FORMAT-LEAVE-UNCHANGED	string	Do not change the current date format. Sent by default if not specified.

Usage

DatePreference is used to determine how dates display to users. The various date formats are returned in the datePreference parameter of the GetUsers response. See [UserInfo \[page 341\]](#) for more information.

XML

The following XML shows DatePreference as seen in the return element of the GetUsers call.

```
<ae:datePreference>DATE-FORMAT-MM-DD-YYYY</ae:datePreference>
```

FieldIdentifier

Description

The FieldIdentifier type holds the generic data for a field. The FieldIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a field.
dbName	string	The unique database field name.

Usage

The FieldIdentifier is the identifier that can be used in Web service methods to uniquely identify a field. The FieldIdentifier contains the generic information about a field (including the display name, ID, and UUID) in addition to the database field name information for the field.



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows FieldIdentifier in the <urn:id> element in a typical call.

```
<urn:id>
  <urn:displayName>Actual Time to Fix</urn:displayName>
  <urn:id>59</urn:id>
  <urn:uuid>838fbaff-e74d-4d47-b415-85b502ea4676</urn:uuid>
  <urn:dbName>ACTUAL_TIME_TO_FIX</urn:dbName>
</urn:id>
```

FileBufferBase64

Description

The FileBufferBase64 type holds the actual contents of a file that you upload to the server in Base64. The FileBufferBase64 type parameters are listed below.

Parameters

Name	Type	Description
data	base64Binary	Holds the Base64 encoded contents of the file.

Usage

None.

XML

The following XML is a snippet of the FileBufferBase64 type.

```
<ae:GetFileAttachmentResponse>
  <ae:return xsi:type="ae:FileAttachmentContents">
    <ae:id>104</ae:id>
    <ae:name>my attachment</ae:name>
    <ae:fileName>fileName.txt</ae:fileName>
    <ae:showAsImage>>false</ae:showAsImage>
    <ae:modificationDateTime>2010-09-17T18:46:25Z</ae:modificationDateTime>
    <ae:accessType>ATTACHACCESS-RESTRICTED</ae:accessType>
    <ae:contentsBase64>
      <ae:data>c2FtcGxlIGZpbGUyYXR0YWNobWVudA==</ae:data>
    </ae:contentsBase64>
```

```
</ae:return>
</ae:GetFileAttachmentResponse>
```

GrantState

Description

The PrivilegeKind enumeration describes a privilege as either an admin or user type of privilege. The PrivilegeKind type parameters are listed below.

Parameters

Name	Type	Description
USER-KIND	string	Denotes a user type of privilege.
ADMIN-KIND	string	Denotes an admin type of privilege.

Usage

All privileges in SBM are divided into two categories: user privileges and administrator privileges. The PrivilegeKind enumeration is used to make this distinction.

XML

The following XML shows PrivilegeKind in the `<urn:kind>` element of the `GetPrivilegeTypes` call.

```
<urn:GetPrivilegeTypes>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
  </urn:auth>
  <urn:kind>ADMIN-KIND</urn:kind>
</urn:GetPrivilegeTypes>
```

GroupInfo

Description

The GroupInfo type holds the name and other information about a group in SBM. The GroupInfo type parameters are listed below.

Parameters

Name	Type	Description
id	GroupIdentifier [page 327]	Contains the complete identification information for a group.

Name	Type	Description
accessType	AccessType [page 319]	Shows the group's product-access type.
memo	string	Contains the contents of the group's memo field.
isDeleted	boolean	Specify true to delete a group during UpdateGroups. The default is false. When returned in the response, it indicates whether or not the group is marked as deleted.

Usage

The GroupInfo type provides complete information about a group in SBM. Use [GetGroups](#) [page 274] to retrieve a list of attributes for a desired group.

XML

The following XML snippet shows the GroupInfo type in the group argument of the CreateGroups call.

```
<urn:group>
  <urn:id>
    <urn:displayName>New_Group1</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:id>
  <urn:accessType>ACCESS-USER</urn:accessType>
  <urn:memo>This group contains regular users.</urn:memo>
  <urn:isDeleted></urn:isDeleted>
</urn:group>
```

The following XML snippet shows the GroupInfo type in the return element of the GetGroups response.

```
<ae:return>
  <ae:group>
    <ae:id xsi:type="ae:GroupIdentifier">
      <ae:displayName>New_Group1</ae:displayName>
      <ae:id>18</ae:id>
      <ae:uuid>cb90f9de-5cc8-4056-bbc6-29caf39bd047</ae:uuid>
    </ae:id>
    <ae:accessType>ACCESS-USER</ae:accessType>
    <ae:memo>This group contains regular users.</ae:memo>
    <ae:isDeleted>>false</ae:isDeleted>
  </ae:group>
</ae:return>
```

GroupIdentifier

Description

The GroupIdentifier type holds the identification information for a user group. The GroupIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a group.

Usage

The GroupIdentifier is the identifier that can be used in Web service methods to uniquely identify a group. The GroupIdentifier contains the generic information about a group (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows GroupIdentifier as seen in a typical call.

```
<urn:group>
  <urn:displayName>CR Submitters</urn:displayName>
  <urn:id>11</urn:id>
  <urn:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</urn:uuid>
</urn:group>
```

GroupIdentifierEx

Description

The GroupIdentifierEx type holds the identification information for one or more groups. The GroupIdentifierEx type parameters are listed below.

Parameters

Name	Type	Description
id	GroupIdentifier [page 327]	Holds the complete identification information for a group.
extendedData	ExtendedData [page 353]	Placeholder for future arguments.

Usage

The GroupIdentifierEx type is used to uniquely identify one or more groups. The GroupIdentifierEx contains complete identification information about one or more groups (including display names, IDs, and UUIDs). GroupIdentifierEx is used to specify multiple groups in a single call or response.

XML

The following XML shows GroupIdentifierEx as seen in the GetGroupMembers call.

```
<urn:group>
  <urn:displayName>CR Submitters</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:group>
<urn:group>
  <urn:displayName>IDM Manager</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:group>
```

The following XML shows GroupIdentifierEx as seen in the GetGroupMembers response.

```
<ae:GetGroupMembersResponse>
  <ae:return>
    <ae:group>
      <ae:id xsi:type="ae:GroupIdentifier">
        <ae:displayName>IDM Manager</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>b2654094-0ec6-460d-856b-9b72709d183b</ae:uuid>
      </ae:id>
    </ae:group>
```

Identifier

Description

The Identifier type holds generic identification information. The Identifier type parameters are listed below.

Parameters

Name	Type	Description
displayName	string	The display name of the object.
id	integer	The TS_ID of the object.
uuid	string	An alternate unique identifier for the object.

Usage

The Identifier is a structure that contains generic identification information about an object in SBM. The identifier is a common set of parameters that are combined with other elements to uniquely define objects in the database. For example, the identifier element is used in combination with other elements like `tableId`, `tableItemId`, and `issueId` to uniquely describe an item in several different ways. The Identifier is used in the following common types:

- [ApplicationIdentifier \[page 320\]](#)
- [ContactIdentifier \[page 322\]](#)
- [FieldIdentifier \[page 323\]](#)
- [GroupIdentifier \[page 327\]](#)
- [ItemIdentifier \[page 329\]](#)
- [ProjectIdentifier \[page 332\]](#)
- [ReportIdentifier \[page 333\]](#)
- [SolutionIdentifier \[page 335\]](#)
- [StateIdentifier \[page 336\]](#)
- [TableIdentifier \[page 337\]](#)
- [TransitionIdentifier \[page 338\]](#)
- [UserIdentifier \[page 339\]](#)
- [WorkflowIdentifier \[page 350\]](#)



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows Identifier in the `<ae:project>` element of a typical call.

```
<urn:project>
  <urn:displayName>Animation Pro</urn:displayName>
  <urn:id>2</urn:id>
  <urn:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</urn:uuid>
  <urn:fullyQualifiedName>Base Project||Base IDT Project||
    Software Development||Animation Pro</urn:fullyQualifiedName>
</urn:project>
```

ItemIdentifier

Description

The ItemIdentifier type holds the identification information for an item. The ItemIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for an item.
tableID	integer	The TS_ID of the table that contains this item.
tableIdItemId	string	The TS_ID of the table, followed by the TS_ID of the item in that table (for example, 1000:164).
issueId	string	Item name for display purposes.

Usage

The ItemIdentifier is the identifier that can be used in Web service methods to uniquely identify an item. The ItemIdentifier contains the generic information about an item (including the display name, ID, and UUID) in addition to table ID and issue ID information for the item.



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows ItemIdentifier as seen in a typical call.



```
<urn:item>
  <urn:displayName>BUG000059</urn:displayName>
  <urn:id>25</urn:id>
  <urn:uuid>7d4703a0-302d-4da3-891e-1d36d43613f2</urn:uuid>
  <urn:tableId>1000</urn:tableId>
  <urn:tableIdItemId>1000:25</urn:tableIdItemId>
  <urn:issueId>000059</urn:issueId>
</urn:item>
```

PrivilegeIdentifier

Description

The PrivilegeIdentifier type holds the identification information for a privilege. The PrivilegeIdentifier type parameters are listed below.

Parameters

Name	Type	Description
name	string	Holds the privilege name.  Note: The privilege name is mandatory, except for the following types: <ul style="list-style-type: none">• TS_FLDPRIVTYPE_ADMGRP• TS_FLDPRIVTYPE_ADMTBL• TS_FLDPRIVTYPE_ADMFLD
type	string	Holds the type of privilege.  Note: The privilege type is optional, except for the following types: <ul style="list-style-type: none">• TS_FLDPRIVTYPE_ADMGRP• TS_FLDPRIVTYPE_ADMTBL• TS_FLDPRIVTYPE_ADMFLD

Usage

The PrivilegeIdentifier is the identifier that can be used in Web service calls to uniquely identify a privilege. The PrivilegeIdentifier contains the privilege name and type.

XML

The following XML shows PrivilegeIdentifier as seen in the `<urn:privilegeName>` argument of a typical call.

```
<urn:HasGroupPrivilege>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password>sa</urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:privilegeName>TS_ADMSYSPRIV_GLOBALADMIN</urn:privilegeName>
  <urn:group>
    <urn:displayName>IM Administrator</urn:displayName>
  </urn:group>
</urn:HasGroupPrivilege>
```

The following XML shows PrivilegeIdentifier as seen in a typical response.

```
<ae:GetGroupPrivilegesResponse>
  <ae:return>
    <ae:name>TS_USRSYSPRIV_EDITPROFILE</ae:name>
    <ae:type>TS_PRIVTYPE_USERSYS</ae:type>
```

```
</ae:return>  
</ae:GetGroupPrivilegesResponse>
```

PrivilegeKind

Description

The PrivilegeKind enumeration describes a privilege as either an admin or user type of privilege. The PrivilegeKind type parameters are listed below.

Parameters

Name	Type	Description
USER-KIND	string	Denotes a user type of privilege.
ADMIN-KIND	string	Denotes an admin type of privilege.

Usage

All privileges in SBM are divided into two categories: user privileges and administrator privileges. The PrivilegeKind enumeration is used to make this distinction.

XML

The following XML shows PrivilegeKind in the `<urn:kind>` element of the `GetPrivilegeTypes` call.

```
<urn:GetPrivilegeTypes>  
  <urn:auth>  
    <urn:userId>bill</urn:userId>  
    <urn:password></urn:password>  
    <urn:hostname></urn:hostname>  
  </urn:auth>  
  <urn:kind>ADMIN-KIND</urn:kind>  
</urn:GetPrivilegeTypes>
```

ProjectIdentifier

Description

The ProjectIdentifier type holds the identification information for a project. The ProjectIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328].	Generic identification extension base. Holds the displayName, id, and uuid for a project.
fullyQualifiedName	string	The fully qualified name of the project. Specifies the project name as it exists in the project hierarchy with respect to project inheritance. To specify the fully qualified name for a project, you start with the Base Project, followed by any other projects in the inheritance chain that lead to your ultimate project.
internalName	string	Holds the unique internal name of the project.

Usage

The ProjectIdentifier is the identifier that can be used in Web service methods to uniquely identify a project. The ProjectIdentifier contains the generic information about a project (including the display name, ID, and UUID) in addition to the fully qualified name and unique internal name.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows ProjectIdentifier as seen in a typical call.

```
<urn:project>
  <urn:displayName>Animation Pro</urn:displayName>
  <urn:id>2</urn:id>
  <urn:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</urn:uuid>
  <urn:fullyQualifiedName>Base Project||Base IDT Project||
  Software Development||Animation Pro</urn:fullyQualifiedName>
  <urn:internalName>TTT_ISSUES.ANIMATION_PRO</urn:internalName>
</urn:project>
```

ReportIdentifier

Description

The ReportIdentifier type holds the identification information for a report. The ReportIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a report.

Usage

The ReportIdentifier is the identifier that can be used in Web service methods to uniquely identify a report. The ReportIdentifier contains the generic information about a report (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows ReportIdentifier as seen in a typical call.

```
<urn:report>
  <urn:displayName>Change Requests By Issue</urn:displayName>
  <urn:id>8</urn:id>
  <urn:uuid>40e8bb61-14fe-409c-aa5e-6399cf3e26a8</urn:uuid>
</urn:report>
```

RoleIdentifier

Description

The RoleIdentifier type holds the identification information for a role. The RoleIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a role.
projectId	ProjectIdentifier [page 332]	Holds the identification information for a project.

Usage

The RoleIdentifier is the identifier that can be used in Web service methods to uniquely identify a role. The RoleIdentifier contains the generic information about a role (including the display name, ID, and UUID) in addition to the associated project.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows RoleIdentifier as seen in a typical call.

```
<urn:role>
  <urn:id>
    <urn:displayName>IDM Administrator</urn:displayName>
    <urn:projectId>
      <urn:displayName>IDM Project</urn:displayName>
    </urn:projectId>
  </urn:id>
  <urn:access>REVOKED</urn:access>
</urn:role>
```

SolutionIdentifier

Description

The SolutionIdentifier type holds the identification information for a solution. The SolutionIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a solution.
uniqueName	string	The database name of the solution.
tabName	string	The name of a tab as defined in SBM Composer.

Usage

The SolutionIdentifier is the identifier that you use in Web service methods to uniquely identify a solution. The SolutionIdentifier contains the generic information about a solution (including the display name, ID, and UUID) in addition to the database name and tab name.



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows SolutionIdentifier as seen in a typical call.

```
<urn:solution>
  <urn:displayName>Issue Defect Management</urn:displayName>
  <urn:id>1</urn:id>
  <urn:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</urn:uuid>
  <urn:uniqueName>ISSUE_DEFECT_MANAGEMENT</urn:uniqueName>
```

```
<urn:tabName>IDM</urn:tabName>
</urn:solution>
```

StateIdentifier

Description

The StateIdentifier type holds the identification information for a state. The StateIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a state.
internalName	string	Holds the unique internal name of the state. This value is set by SBM Composer and cannot be changed once it has been set and published.
isClosed	boolean	Boolean value to indicate if the state is active or inactive.

Usage

The StateIdentifier is the identifier that can be used in Web service methods to uniquely identify a state. The StateIdentifier contains generic information about a state (including the display name, ID, and UUID), the unique internal name of the state, and the state's active or inactive status.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows StateIdentifier as seen in a typical call.

```
<urn:state>
  <urn:displayName>Evaluating Issue</urn:displayName>
  <urn:id>1</urn:id>
  <urn:uuid>985caf28-7a1c-4038-b6e2-c11703b214cd</urn:uuid>
  <urn:internalName>SOFTWARE_ISSUES.EVALUATING_ISSUE</urn:internalName>
  <urn:isClosed>>false</urn:isClosed>
</urn:state>
```

TableIdentifier

Description

The TableIdentifier type holds the identification information for a table. The TableIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a table.
dbName	string	The unique database name of the table

Usage

The TableIdentifier is the identifier that can be used in Web service methods to uniquely identify a table. The TableIdentifier contains the generic information about a table (including the display name, ID, and UUID) in addition to the database name of the table.



Note: You can send any one of the elements in the identifier--you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows TableIdentifier as seen in a typical call.

```
<urn:table>
  <urn:displayName>Issues</urn:displayName>
  <urn:id>1000</urn:id>
  <urn:uuid>dc8cd329-b430-436f-bb75-bf90008e6a50</urn:uuid>
  <urn:dbName>UBG_ISSUES</urn:dbName>
</urn:table>
```

TimePreference

Description

TimePreference indicates a user's preferred time format. The available options are listed below.

Parameters

Name	Type	Description
TIME-FORMAT-12HOUR	string	Indicates a 12-hour clock preference.
TIME-FORMAT-24HOUR	string	Indicates a 24-hour clock preference.

Name	Type	Description
TIME-FORMAT-USE-GMT-OFFSET	string	Indicates the use of a GMT offset. (No longer used).
TIME-FORMAT-HONOR-DAYLIGHT	string	Indicates time format with daylight savings honored. (No longer used).
TIME-FORMAT-LEAVE-UNCHANGED	string	Do not change the current time format. Sent by default if not specified.

Usage

TimePreference is used to determine how time is displayed to users. The various time formats are returned in the timePreference parameter of the GetUsers response. See [UserInfo \[page 341\]](#) for more information.

XML

The following XML shows TimePreference as seen in the return element of a GetUsers response.

```
<ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
```

TransitionIdentifier

Description

The TransitionIdentifier type holds the identification information for a transition. The TransitionIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a transition.
internalName	string	Holds the unique internal name of the transition. This value is set by SBM Composer and cannot be changed once it has been set and published.

Usage

The TransitionIdentifier is the identifier that can be used in Web service methods to uniquely identify a transition. The TransitionIdentifier contains the generic information about a transition (including the display name, ID, and UUID) and the unique internal name of the transition.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows TransitionIdentifier as seen in a typical call.

```
<urn:transition>
  <urn:displayName>Approve</urn:displayName>
  <urn:id>4</urn:id>
  <urn:uuid>a78f0a30-1305-46c2-b661-df8219c105b2</urn:uuid>
  <urn:internalName>SOFTWARE_ISSUES.APPROVE</urn:internalName>
</urn:transition>
```

UserIdentifier

Description

The UserIdentifier type holds the identification information for a user. The UserIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a user.
loginId	string	The unique login ID for the user.

Usage

The UserIdentifier is the identifier that can be used in Web service methods to uniquely identify a user. The UserIdentifier contains the generic information about a user (including the display name, ID, and UUID) in addition to the login ID for the user.



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows UserIdentifier as seen in a typical call.

```
<urn:user>
  <urn:displayName>Joe Manager</urn:displayName>
  <urn:id>2</urn:id>
```

```

    <urn:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</urn:uuid>
    <urn:loginId>joe</urn:loginId>
  </urn:user>

```

UserIdentifierEx

Description

The UserIdentifierEx type holds the identification information for one or more users. The UserIdentifierEx type parameters are listed below.

Parameters

Name	Type	Description
id	UserIdentifier [page 339]	Holds the complete identification information for a user.
extendedData	ExtendedData [page 353]	Placeholder for future arguments.

Usage

The UserIdentifierEx type is used to uniquely identify one or more users. The UserIdentifierEx type contains complete identification information about one or more users (including display names, IDs, and UUIDs). UserIdentifierEx is used to specify multiple users in a single call or response.

XML

The following XML shows UserIdentifierEx as seen in a typical call.

```

<urn:user>
  <urn:displayName>Joe Manager</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:user>
<urn:user>
  <urn:displayName>Chad Support</urn:displayName>
  <urn:id></urn:id>
  <urn:uuid></urn:uuid>
</urn:user>

```

The following XML shows UserIdentifierEx as seen in the GetGroupMembers response.

```

<ae:member>
  <ae:id xsi:type="ae:UserIdentifier">
    <ae:displayName>Joe Manager</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</ae:uuid>
  </ae:id>
</ae:member>
<ae:member>

```

```

    <ae:id xsi:type="ae:UserIdentifier">
      <ae:displayName>Carmen Chief Officer</ae:displayName>
      <ae:id>10</ae:id>
      <ae:uuid>c4a1c377-569c-469a-913b-9e1e94e88f26</ae:uuid>
    </ae:id>
  </ae:member>

```

UserInfo

Description

The UserInfo type holds the name and other information about a user in SBM. The UserInfo type parameters are listed below.

Parameters

Name	Type	Description
id	UserIdentifier [page 339]	Holds the complete identification information and login ID for a user account.
accessType	AccessType [page 319]	Shows the user's product-access type.
email	string	The user's primary email address.
emailCC	string	The user's CC email addresses.
timezone	string	The user's time zone.
offsetFromGMT	integer	This is the time zone's raw GMT offset.
dstSavings	integer	The amount of time in milliseconds to be added to local standard time to get local wall clock time.
datePreference	DatePreference [page 322]	The user's date preference.
timePreference	TimePreference [page 337]	The user's time preference.
namespaceName	string	The user's namespace name.
phoneNumber	string	The user's phone number.
locale	string	The user's designated locale.

Name	Type	Description
isDeleted	boolean	Specify true to delete a user during UpdateUsers. The default is false. When returned in the response, it indicates whether or not the user is marked as deleted.
contact	ContactIdentifier [page 322]	Holds identification information for the user's associated contact record.
maxNotes	integer	Indicates the maximum number of notes to display on an item.
maxChangeHistory	integer	Indicates the maximum number of change history records to display on an item.
maxItemsPerPage	integer	Indicates the maximum number of items to display per page search and report results.
group	GroupIdentifier [page 327]	Holds the identification information for groups to which the user belongs. One or more GroupIdentifiers are returned for each group.
fieldsMask	integer	Bit mask that indicates which field sections the user would like displayed as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .
notesMask	integer	Bit mask that indicates the user's preference for displaying notes as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .
changeHistoryMask	integer	Bit mask that indicates the user's preference for displaying change history information as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .
browserMask	integer	Bit mask that indicates the user's browser preferences as described in the TS_USERS table in the <i>SBM Database Schema Reference Guide</i> .
preferredSolution	SolutionIdentifier [page 335]	Holds the identification information for the user's preferred application. This setting determines which application tab is selected by default when the user first enters the SBM User Workspace.

Name	Type	Description
solutionData	UserSolutionData [page 348]	Contains the ordered-list of application tabs that appear for the user in the SBM User Workspace. The application identification information, home page report, and user's preferred projects are returned for each application.
extendedData	ExtendedData [page 353]	Placeholder for future arguments. In <code>UserInfo</code> , you can use <code>extendedData</code> to send values for <code>Title</code> , <code>MobilePhone</code> , <code>EmailAliases</code> , and <code>PreferredContactMethod</code> .

Usage

The `UserInfo` type provides a user account in SBM. Use [GetUsers \[page 286\]](#) to retrieve a list of attributes for a specified user.

The `timezone` parameter is a programmatic ID; for example, "America/Los_Angeles". This ID is used to call up a specific real-world time zone. It corresponds to the IDs defined in the standard Olson data used by UNIX systems, and has the format continent/city or ocean/city.

The `offsetFromGMT` parameter is the time zone's raw GMT offset (i.e., the number of milliseconds to add to GMT to get local time, before taking Daylight Saving Time into account). If DST is in effect for a given date, use the `dstSavings` value to adjust this offset.

The `dstSavings` parameter is the amount of time in milliseconds to be added to local standard time to get local wall clock time. If Daylight Saving Time is not observed in this user's timezone, this value will be 0. This value should be used only to adjust a date/time that is within the DST observation period.

The `namespaceName` parameter returns the name of the namespace that was generated while provisioning the customer environment. If the user does not belong to a namespace, then the default namespace name ("00000") is returned.

In `UserInfo`, you can use `extendedData` to send values for `Title`, `MobilePhone`, `EmailAliases`, and `PreferredContactMethod`. Possible values for `PreferredContactMethod` include: **Any**, **E-mail**, **Phone**, and **MobilePhone**. For example:

```
<urn:extendedData>
  <urn:data>
    <urn:name>Title</urn:name>
    <urn:value>Development Manager</urn:value>
  </urn:data>
  <urn:data>
    <urn:name>MobilePhone</urn:name>
    <urn:value>555-555-5555</urn:value>
  </urn:data>
  <urn:data>
    <urn:name>EmailAliases</urn:name>
    <urn:value>bill_1@office.com;bill_2@office.com;bill_3@office.com</urn:value>
  </urn:data>
</urn:extendedData>
```

```
</urn:data>
<urn:data>
  <urn:name>PreferredContactMethod</urn:name>
  <urn:value>e-mail</urn:value>
</urn:data>
</urn:extendedData>
```

In the `extendedData` element of the `UserInfo` argument in a `CreateUsers` call, you can send `ShareTemplateUserContact` and `true` as a name-value pair to share the template user's contact record with the new user. If this pairing is not specified, a new contact record is created by default instead.

XML

The following XML snippet shows the `UserInfo` argument in the `CreateUsers` call.

```
<urn:user>
  <urn:id>
    <urn:displayName>John Doe</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:loginId>JDoe</urn:loginId>
  </urn:id>
  <urn:accessType>ACCESS-USER</urn:accessType>
  <urn:email>johndoe@companyName.com</urn:email>
  <urn:emailCC></urn:emailCC>
  <urn:timezone></urn:timezone>
  <urn:offsetFromGMT>-25200000</urn:offsetFromGMT>
  <urn:dstSavings>3600000</urn:dstSavings>
  <urn:datePreference>DATE-FORMAT-FROM-LOCALE</urn:datePreference>
  <urn:timePreference>TIME-FORMAT-12HOUR</urn:timePreference>
  <urn:namespaceName></urn:namespaceName>
  <urn:phoneNumber>111-111-1111</urn:phoneNumber>
  <urn:locale>en_US</urn:locale>
  <urn:isDeleted></urn:isDeleted>
  <urn:contact></urn:contact>
  <urn:maxNotes>10</urn:maxNotes>
  <urn:maxChangeHistory>10</urn:maxChangeHistory>
  <urn:maxItemsPerPage>20</urn:maxItemsPerPage>
  <urn:group>
    <urn:displayName>CR Submitters</urn:displayName>
  </urn:group>
  <urn:fieldsMask></urn:fieldsMask>
  <urn:notesMask></urn:notesMask>
  <urn:changeHistoryMask></urn:changeHistoryMask>
  <urn:browserMask></urn:browserMask>
  <urn:preferredSolution>
    <urn:displayName>Issue Defect Management</urn:displayName>
  </urn:preferredSolution>
  <urn:solutionData>
    <urn:solution>
      <urn:displayName>Issue Defect Management</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:uniqueName></urn:uniqueName>
```

```

    <urn:tabName>IDM</urn:tabName>
  </urn:solution>
  <urn:homeReport>
    <urn:displayName>Built-In: All Items</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:homeReport>
  <urn:preferredProject>
    <urn:displayName>Animation Pro</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:fullyQualifiedName></urn:fullyQualifiedName>
  </urn:preferredProject>
</urn:solutionData>
<urn:extendedData>
  <urn:data>
    <urn:name>Title</urn:name>
    <urn:value>Development Manager</urn:value>
  </urn:data>
  <urn:data>
    <urn:name>MobilePhone</urn:name>
    <urn:value>555-555-5555</urn:value>
  </urn:data>
  <urn:data>
    <urn:name>EmailAliases</urn:name>
    <urn:value>bill_1@office.com;bill_2@office.com;bill_3@office.com</urn:value>
  </urn:data>
  <urn:data>
    <urn:name>PreferredContactMethod</urn:name>
    <urn:value>e-mail</urn:value>
  </urn:data>
</urn:extendedData>
</urn:user>

```

The following XML snippet shows the UserInfo type in the return element of the GetUsers response.

```

<ae:user>
  <ae:id xsi:type="ae:UserIdentifier">
    <ae:displayName>John Support Manager</ae:displayName>
    <ae:id>21</ae:id>
    <ae:uuid>08784a43-970f-4d28-9a6e-c301077ca653</ae:uuid>
    <ae:loginId>john</ae:loginId>
  </ae:id>
  <ae:accessType>ACCESS-USER</ae:accessType>
  <ae:email>john@companyName.com</ae:email>
  <ae:emailCC/>
  <ae:timezone/>
  <ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
  <ae:dstSavings>3600000</ae:dstSavings>
  <ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
  <ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
  <ae:namespaceName>00000</ae:namespaceName>
  <ae:phoneNumber/>

```

```
<ae:locale>en_US</ae:locale>
<ae:isDeleted>>false</ae:isDeleted>
<ae:maxNotes>10</ae:maxNotes>
<ae:maxChangeHistory>10</ae:maxChangeHistory>
<ae:maxItemsPerPage>20</ae:maxItemsPerPage>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>Everyone</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>ade39c21-e7b2-4dcb-a231-d3d872671b59</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IDM View Only</ae:displayName>
  <ae:id>5</ae:id>
  <ae:uuid>af38532d-e79c-495f-a3e6-f4bf784cc492</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Technician</ae:displayName>
  <ae:id>6</ae:id>
  <ae:uuid>902a1300-6ae1-44d7-b46a-e420babe8497</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Manager</ae:displayName>
  <ae:id>7</ae:id>
  <ae:uuid>b70af5de-6642-4228-b9bb-d0da59bb6909</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Administrator</ae:displayName>
  <ae:id>8</ae:id>
  <ae:uuid>b77b6e9d-e75a-4841-be1b-9c358affb797</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Approval Board Members</ae:displayName>
  <ae:id>13</ae:id>
  <ae:uuid>ea167b8c-e9ea-4196-9727-dfd2f10fd751</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Submitters</ae:displayName>
  <ae:id>11</ae:id>
  <ae:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</ae:uuid>
</ae:group>
<ae:fieldsMask>1</ae:fieldsMask>
<ae:notesMask>4</ae:notesMask>
<ae:changeHistoryMask>4</ae:changeHistoryMask>
<ae:browserMask>13635632</ae:browserMask>
<ae:preferredSolution xsi:type="ae:SolutionIdentifier">
  <ae:displayName>Incident Management</ae:displayName>
  <ae:id>2</ae:id>
  <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
  <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
  <ae:tabName>Incident Mgmt</ae:tabName>
</ae:preferredSolution>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Incident Management</ae:displayName>
    <ae:id>2</ae:id>
```

```

        <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
        <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
        <ae:tabName>Incident Mgmt</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Trend Of Incidents Closed On Initial Call</ae:displayName>
        <ae:id>38</ae:id>
        <ae:uuid>f8a5ce79-4b40-45cf-9f6d-735d060e90de</ae:uuid>
    </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Change Request Management</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
        <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
        <ae:tabName>Change Requests</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
        <ae:id>-6</ae:id>
        <ae:uuid>-6</ae:uuid>
    </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Issue Defect Management</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
        <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
        <ae:tabName>IDM</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
        <ae:id>-6</ae:id>
        <ae:uuid>-6</ae:uuid>
    </ae:homeReport>
</ae:solutionData>
<ae:extendedData>
    <ae:data>
        <ae:name>Title</ae:name>
        <ae:value>Development Manager</ae:value>
    </ae:data>
    <ae:data>
        <ae:name>MobilePhone</ae:name>
        <ae:value>555-555-5555</ae:value>
    </ae:data>
    <ae:data>
        <ae:name>PreferredContactMethod</ae:name>
        <ae:value>E-mail</ae:value>
    </ae:data>
</ae:extendedData>
</ae:user>

```

UserSolutionData

Description

The UserSolutionData type holds identification information and user settings for a solution (also known as an application) in SBM. The UserSolutionData type parameters are listed below.

Parameters

Name	Type	Description
solution	SolutionIdentifier [page 335]	Holds the identification information for a solution.
homeReport	ReportIdentifier [page 333]	Holds the identification information for a report. The report that is returned indicates the user's home page report.
preferredProject	ProjectIdentifier [page 332]	Holds the identification for a project. One or more projects are returned. The list of projects indicates the user's preferred projects.

Usage

The UserSolutionData type holds the SolutionIdentifier and additional information used to describe the settings for an application that a user has access to. You can use [GetUsers](#) [page 286] to retrieve the user solution data shown here. The GetUsers response contains one or more UserSolutionData elements that comprise an ordered-list of the application tabs that are available to the user in the SBM User Workspace. You can use [UpdateUsers](#) [page 312] to re-establish this order, update the home page report, and designate the user's preferred projects.

XML

The following XML snippet shows UserSolutionData in the `<urn:solutionData>` element of the UpdateUsers call.

```
<urn:solutionData>
  <urn:solution>
    <urn:displayName></urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
    <urn:uniqueName>ISSUE_DEFECT_MANAGEMENT</urn:uniqueName>
    <urn:tabName>IDM</urn:tabName>
  </urn:solution>
  <urn:homeReport>
    <urn:displayName>Built-In: All Active Items I Own</urn:displayName>
    <urn:id></urn:id>
    <urn:uuid></urn:uuid>
  </urn:homeReport>
  <urn:preferredProject>
    <urn:displayName>Animation Pro</urn:displayName>
    <urn:id>6</urn:id>
  </urn:preferredProject>
</urn:solutionData>
```

```

        <urn:uuid></urn:uuid>
        <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
    </urn:preferredProject>
</urn:solutionData>
<urn:solutionData>
    <urn:solution>
        <urn:displayName></urn:displayName>
        <urn:id></urn:id>
        <urn:uuid></urn:uuid>
        <urn:uniqueName>INCIDENT_MANAGEMENT</urn:uniqueName>
        <urn:tabName>Incident Mgmt</urn:tabName>
    </urn:solution>
    <urn:homeReport>
        <urn:displayName>Built-In: All Active Items I Own</urn:displayName>
        <urn:id></urn:id>
        <urn:uuid></urn:uuid>
    </urn:homeReport>
    <urn:preferredProject>
        <urn:displayName>IM Project</urn:displayName>
        <urn:id>3</urn:id>
        <urn:uuid></urn:uuid>
        <urn:fullyQualifiedNames></urn:fullyQualifiedNames>
    </urn:preferredProject>
</urn:solutionData>

```

The following XML snippet shows the UserSolutionData type in the return element of the UpdateUsers response.

```

<ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Incident Management</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
        <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
        <ae:tabName>Incident Mgmt</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
        <ae:id>-11</ae:id>
        <ae:uuid>-11</ae:uuid>
    </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Change Request Management</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
        <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
        <ae:tabName>Change Requests</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
        <ae:id>-11</ae:id>
        <ae:uuid>-11</ae:uuid>
    </ae:homeReport>
</ae:solutionData>

```

```
</ae:homeReport>
</ae:solutionData>
```

WorkflowIdentifier

Description

The WorkflowIdentifier type holds the identification information for a workflow. The WorkflowIdentifier type parameters are listed below.

Parameters

Name	Type	Description
identifier	Extension. See Identifier [page 328] .	Generic identification extension base. Holds the displayName, id, and uuid for a workflow.

Usage

The WorkflowIdentifier is the identifier that can be used in Web service methods to uniquely identify a workflow. The WorkflowIdentifier contains the generic information about a workflow (including the display name, ID, and UUID).



Note: You can send any one of the elements in the identifier—you do not need to provide values for every element. You only need to provide more than one element in the event that the first element does not uniquely identify the object.

XML

The following XML shows WorkflowIdentifier as seen in a typical call.

```
<urn:workflow>
  <urn:displayName>IDM</urn:displayName>
  <urn:id>2</urn:id>
  <urn:uuid>5296c4b1-4bab-48a9-83b3-1f633894ef33</urn:uuid>
</urn:workflow>
```

Arguments

This section provides detailed descriptions of SBM Administrative Web service arguments. The arguments are the request parameters that you use in SBM Administrative Web service operations. The arguments listed here contain one or more parameters, which make up the data that is sent to the Web service. The parameters listed in each argument are either simple or complex types themselves. If the parameter is a complex type, click the link in the **Type** column for more detail.

The following table lists all supported arguments in alphabetical order, followed by a brief description. Select an argument to view detailed information including:

- **Description** – A brief description of the argument.
- **Parameters** – A table that describes the simple and complex types for each argument. For each complex type, click the type name for a detailed description.

- **Usage** – Any notes, additional details, and considerations are addressed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Arguments

Argument	Description
Auth [page 352]	Supplies credentials and optionally, a host name for licensing.
ExtendedData [page 353]	Placeholder argument for future argument elements.
ExtraValue [page 353]	Holds a name value pairing for future elements.
GroupListAction [page 354]	Specifies whether the service should add, remove, or replace groups.
MultipleOption [page 356]	Specifies whether a service should stop on failure and send an error message or continue processing.
MultipleOptions [page 357]	Holds the Options type and an enumeration to determine if a service should stop on failure and send an error message or continue processing.
MultipleResponseItemOptions [page 357]	Holds the Options type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing. Also enables you to limit the data that is returned in a response.
Options [page 360]	Holds the ExtraValue type, which contains name value pairing for future arguments on certain calls.
PrivilegeInfo [page 360]	Holds the name and assignment information for a privilege.
RoleInfo [page 361]	Holds the role name and assignment information for users and groups.
SectionsOption [page 363]	Determines the section of an item to return.

Argument	Description
UserResponseOptions [page 365]	Holds the Options type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing. Also enables you to limit the data that is returned in a response.

Auth

Description

The Auth type supplies credentials and optionally, a host name for licensing. The Auth type parameters are listed below.

Parameters

Name	Type	Description
userID	string	The SBM user Login ID. If you are only specifying the host name, then userID is optional.
password	string	The password for the user. If you are only specifying the host name, then password is optional.
hostname	string	The host name of the client.
loginAsUserId	string	User ID for the SBM login you wish to impersonate. If you are only specifying the host name, then loginAsUserId is optional.
extendedData	ExtendedData [page 353]	Placeholder for future arguments.

Usage

The Auth type allows credentials to be provided if not using WS-SECURITY or HTTP BASIC to pass the credentials. The hostname element is only needed in case you want to override the client's IP address for licensing purposes, forcing License Manager to use a particular client host. If it is not provided, the code gets the client hostname from the socket.



Note: The loginAsUserId parameter requires that the calling user is either a Global Managed Administrator or a Managed Administrator with Admin privileges to one of the groups which the user to be impersonated belongs.

XML

The following XML shows Auth as seen in a typical call.

```
<urn:auth>
  <urn:userId>admin</urn:userId>
```



```
<urn:password>password</urn:password>
<urn:hostname>localhost</urn:hostname>
<urn:loginAsUserId></urn:loginAsUserId>
<urn:extendedData></urn:extendedData>
</urn:auth>
```

ExtendedData

Description

The ExtendedData type is a placeholder for future argument or response elements. The ExtendedData type parameters are listed below.

Parameters

Name	Type	Description
data	ExtraValue [page 353]	Holds the name value pair for an additional argument or response element.

Usage

The ExtendedData type is simply a placeholder for future arguments that might be added to a given call. Responses have a similar placeholder for future response elements.

XML

The following XML shows ExtendedData as seen within the auth argument of a typical call.

```
<urn:auth>
  <urn:userId>admin</urn:userId>
  <urn:password>password</urn:password>
  <urn:hostname>localhost</urn:hostname>
  <urn:loginAsUserId></urn:loginAsUserId>
  <urn:extendedData>
    <urn:data>
      <urn:name></urn:name>
      <urn:value></urn:value>
    </urn:data>
  </urn:extendedData>
</urn:auth>
```

ExtraValue

Description

ExtraValue holds a name value pairing for future elements.

Parameters

Name	Type	Description
name	extraValue	Holds the name of a future element.

Name	Type	Description
value	string	Holds the value of a future element.

Usage

None.

XML

The following XML shows ExtraValue in the `<urn:extraOption>` element in a typical call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
</urn:options>
```

GroupListAction

Description

The GroupListAction enumeration enables you to specify whether groups should be added, replaced, or removed during the UpdateUsers call.

Parameters

Name	Type	Description
ADD-GROUPS	string	Adds the specified groups on update.
REPLACE-GROUPS	string	Replaces the existing groups on update.
REMOVE-GROUPS	string	Removes the specified groups on update.

Usage

The GroupListAction element enables you to control how user groups are processed during the UpdateUsers call. Using the groupAction argument, you set one to these options to add, replace, or remove existing groups. See [UpdateUsers \[page 312\]](#) for additional information.

XML

The following XML shows GroupListAction in the `<urn:groupAction>` element of the UpdateUsers call. In this example, Joe is added to the CR Submitters group:

```
<urn:UpdateUsers>
  <urn:auth>
    <urn:userId></urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
```

```

    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:allowEmptyValues>>false</urn:allowEmptyValues>
  <urn:groupAction>ADD-GROUPS</urn:groupAction>
  <urn:user>
    <urn:id>
      <urn:displayName>Joe</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
      <urn:loginId>Joe</urn:loginId>
    </urn:id>
    <urn:contact>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:contact>
    <urn:group>
      <urn:displayName>CR Submitters</urn:displayName>
      <urn:id></urn:id>
      <urn:uuid></urn:uuid>
    </urn:group>
  </urn:user>
</urn:UpdateUsers>

```

In this example, the current group membership for Nancy and Carmen is replaced. Nancy and Carmen now only belong to CR Submitters:

```

<urn:UpdateUsers>
  <urn:auth>
    <urn:userId>Admin</urn:userId>
    <urn:password></urn:password>
    <urn:hostname></urn:hostname>
    <urn:loginAsUserId></urn:loginAsUserId>
  </urn:auth>
  <urn:allowEmptyValues>>false</urn:allowEmptyValues>
  <urn:groupAction>REPLACE-GROUPS</urn:groupAction>
  <urn:user>
    <urn:id>
      <urn:loginId>Nancy</urn:loginId>
    </urn:id>
    <urn:contact>
      <urn:displayName></urn:displayName>
    </urn:contact>
    <urn:group>
      <urn:displayName>CR Submitters</urn:displayName>
    </urn:group>
  </urn:user>
  <urn:user>
    <urn:id>
      <urn:loginId>Carmen</urn:loginId>
    </urn:id>
    <urn:contact>
      <urn:displayName></urn:displayName>
      <urn:id></urn:id>
    </urn:contact>
  </urn:user>
</urn:UpdateUsers>

```

```

        <urn:uuid></urn:uuid>
    </urn:contact>
    <urn:group>
        <urn:displayName>CR Submitters</urn:displayName>
    </urn:group>
</urn:user>
</urn:UpdateUsers>

```

MultipleOption

Description

The MultipleOption enumeration enables you to specify whether a Web service should stop on failure and send an error message or continue processing.

Parameters

Name	Type	Description
CONTINUE-ON-FAILURE	string	If a failure is encountered, continue processing the rest of the items in the call.
STOP-ON-FAILURE	string	If a failure is encountered, stop processing items and return an error.

Usage

The MultipleOption element enables you to specify whether the service should continue if an error is encountered, or stop and throw an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. Failures do not result in a return before all items have been processed. See [GroupHolder \[page 368\]](#) for an example of a GetGroups call that returns an error, but continues to process the rest of the records.

XML

The following XML shows MultipleOption in the `<urn:multiOption>` element of a typical call.

```

<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  <urn:sections>SECTIONS-ALL</urn:sections>
  <urn:specifiedSections></urn:specifiedSections>
  </urn:limitedField>
</urn:options>

```

MultipleOptions

Description

MultipleOptions holds the Options type and enables you to specify whether a Web service should continue if an error is encountered, or stop and throw an error.

Parameters

Name	Type	Description
options	Extension. See Options [page 360] .	Options extension base. Holds name value pairing for future arguments on certain calls.
multiOption	MultipleOption [page 356]	Enumeration element that holds the option to continue or stop processing of items.

Usage

MultipleOptions holds the Options type and the MultipleOption type. You use the multiOption parameter to control service handling as follows:

- **multiOption** – Use the multiOption element to specify whether the service should continue if an error is encountered, or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. If you specify CONTINUE-ON-FAILURE, then failures do not result in a return before all items have been processed. For more information, see [MultipleOption \[page 356\]](#).

XML

The following XML shows MultipleOptions in the <urn:options> element in a typical call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
</urn:options>
```

MultipleResponseItemOptions

Description

MultipleResponseItemOptions holds the Options type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing. It also enables you to limit the data that is returned in a response.

Parameters

Name	Type	Description
options	Extension. See Options [page 360] .	Options extension base. Holds a name value pairing for future elements.
multiOption	MultipleOption [page 356]	Enumeration element that holds the option to continue processing or stop when an error is encountered.
sections	SectionsOption [page 363]	Enumeration element that controls the sections of an item that should be returned.
specifiedSections	string	If SECTIONS-SPECIFIED is used in the sections element above, enter the specified section or sections here. The available options are described below in the Usage section.
limitedField	FieldIdentifier [page 323]	Enables you to limit the return results based on one or more fields that you identify.

Usage

The `MultipleResponseItemOptions` contains the same functionality as `MultipleOptions`, but it also enables you to limit the return results based on item sections or specific fields that you identify.

You use the following parameters to control service handling and the amount of data that is returned in the response:

- **multiOption** – Use the `multiOption` element to specify whether the service should continue if an error is encountered, or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. If you specify `CONTINUE-ON-FAILURE`, then failures do not result in a return before all items have been processed. For more information, see [MultipleOption \[page 356\]](#).
- **sections** and **specifiedSections** – Use these elements to specify which parts of an item should be returned in order to limit the data that is returned for a given item. The sections that are not specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want. For more information, see [SectionsOption \[page 363\]](#). In the `sections` parameter, specify one of the following enumeration options:
 - **SECTIONS-ALL** – Returns all sections. This is the default value for the `sections` argument. If no value is specified, `ALL` is the assumed value.
 - **SECTIONS-NONE** – No sections are returned (only the `ItemIdentifier` is returned). Note that the `ItemIdentifier` is always returned, regardless of the value or values specified in the `sections` parameter.

-
- **SECTIONS-SPECIFIED** – Returns sections that you specify.

You can use a comma-separated list in `specifiedSections` to return only the sections of an item you want. For example:

```
<urn:specifiedSections>SECTION:FIXED,SECTION:EXTENDED</urn:specifiedSections>
```

This ensures that only the fixed and extended sections of an item are returned. Here are some of the possible sections you can specify:

- **SECTION:FIXED** – All parameters in `TTItem` (from `<urn:itemType>` to `<urn:url>`) prior to the `extendedField` parameter are returned.
- **SECTION:EXTENDED** – Returns all of the `extendedFields` in `TTItem`.
- **SECTION:ATTACHMENTS** – Returns all of the attachment sections of `TTItem`. You can return the next four sections simply by specifying:

```
<urn:specifiedSections>SECTION:ATTACHMENTS</urn:specifiedSections>
```

- **SECTION:NOTES** – Returns all note sections of `TTItem`.
- **SECTION:ITELINKS** – Returns all `itemLink` sections of `TTItem`.
- **SECTION:URLATTACHMENTS** – Returns all `urlAttachment` sections of `TTItem`.
- **SECTION:FILEATTACHMENTS** – Returns all `fileAttachment` sections of `TTItem`.



Note: If you specify `SECTION:NONE` after other sections, those preceding sections will not be returned. For example, `SECTION:FIXED,SECTION:NONE,SECTION:EXTENDED` will only return the `extendedField` sections.

- **limitedField** – Use the `limitedField` element to use specific fields to limit the item data that is returned. For example, you can specify one or more fields to limit a service response to return only the fields that you want to return. In the event that `limitedField` contradicts the `sections` value, the `sections` specification takes precedence. The following XML shows how to limit return results using the `limitedField` option.

```
<urn:limitedField>
  <urn:displayName>Severity</urn:displayName>
  <urn:id>69</urn:id>
  <urn:uuid>f4eff572-2e29-4d7f-8478-8e9e16865c2c</urn:uuid>
  <urn:dbName>SEVERITY</urn:dbName>
</urn:limitedField>
```

XML

The following XML shows `MultipleResponseItemOptions` in the `<urn:options>` element of a typical call.

```
<urn:options>
  <urn:extraOption>
```

```

    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:EXTENDED</urn:specifiedSections>
  </urn:limitedField>
</urn:options>

```

Options

Description

Options holds the ExtraValue type, which contains a name value pairing for future arguments on certain calls.

Parameters

Name	Type	Description
extraOption	ExtraValue [page 353]	Holds a name value pairing for future elements.

Usage

None.

XML

The following XML shows Options as seen in a typical call.

```

<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
</urn:options>

```

PrivilegeInfo

Description

The PrivilegeInfo type holds the name and assignment information for a privilege. The PrivilegeInfo type parameters are listed below.

Parameters

Name	Type	Description
privilegeId	PrivilegeIdentifier [page 113]	Mandatory privilege identifier. Holds the complete identification information for a privilege.

Name	Type	Description
access	GrantState [page 104]	Mandatory enumeration element that holds privilege assignment information.
objectId	Identifier [page 107]	Object identifier; object type depends on the PrivilegeIdentifier attributes (privilege name or type). Refer to the tables in SetUserPrivileges [page 304] or SetGroupPrivileges [page 299] for the objectId that must accompany each privilege type.
projectId	ProjectIdentifier [page 114]	Optional project identifier. Mandatory for TS_FLDPRIVTYPE_ADMFLD privilege to uniquely identify a field by the field name and project name; however, it is not required if the field is identified by UUID or database ID.
extendedData	ExtendedData [page 162]	Placeholder for future arguments.

Usage

The PrivilegeInfo type contains the privilege name and how the privilege is currently assigned. You use PrivilegeInfo in the [SetUserPrivileges \[page 304\]](#) and [SetGroupPrivileges \[page 299\]](#) calls to assign privileges to particular users or groups.

XML

The following XML shows PrivilegeInfo as seen in the `<urn:privilege>` element in a typical call.

```

<urn:privilege>
  <urn:privilegeId>
    <urn:name>TS_USRPRJPRIV_DELETE</urn:name>
  </urn:privilegeId>
  <urn:access>GRANTED</urn:access>
  <urn:objectId>
    <urn:displayName>IM Project</urn:displayName>
  </urn:objectId>
</urn:privilege>

```

RoleInfo

Description

The RoleInfo type holds the name and assignment information about roles for users and groups. The RoleInfo type parameters are listed below.

Parameters

Name	Type	Description
id	RoleIdentifier [page 334]	Holds the complete identification information and associated project for a role.
access	GrantState [page 325]	Enumeration element that holds role assignment information.
extendedData	ExtendedData [page 353]	Placeholder for future arguments.

Usage

The RoleInfo type contains the role name and how the role is currently assigned. The GetUserRoles and GetGroupRoles calls return lists of RoleInfo records that are assigned to particular users or groups.

XML

The following XML shows RoleInfo as seen in the <urn:role> element in a typical call.

```

<urn:SetGroupRoles>
  <urn:auth>
    <urn:userId>bill</urn:userId>
    <urn:password>sa</urn:password>
    <urn:hostname>localhost</urn:hostname>
  </urn:auth>
  <urn:group>
    <urn:displayName>IDM View Only</urn:displayName>
  </urn:group>
  <urn:role>
    <urn:id>
      <urn:displayName>IDM Team</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
    <urn:access>GRANTED</urn:access>
  </urn:role>
  <urn:role>
    <urn:id>
      <urn:displayName>IDM Administrator</urn:displayName>
      <urn:projectId>
        <urn:displayName>IDM Project</urn:displayName>
      </urn:projectId>
    </urn:id>
    <urn:access>INHERITED</urn:access>
  </urn:role>
</urn:SetGroupRoles>

```

SectionsOption

Description

SectionsOption indicates the sections that should be returned for a record.

Parameters

Name	Type	Description
SECTIONS-ALL	string	Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value.
SECTIONS-NONE	string	No sections are returned (only the Identifier is returned). Note that the Identifier element is always returned, regardless of the value or values specified in the sections parameter.
SECTIONS-SPECIFIED	string	Returns sections that you specify.

Usage

Use the `sections` and `specifiedSections` arguments to specify which parts of a record should be returned in order to limit the total amount of data that is returned. The sections that are not specified are not included in the response. For example, if the items have a large number of item links, notes, URL and file attachments that don't need to be returned in the response, use these parameters to return only the sections of an item you want. If you only need basic user information in the `GetUsers` response, use the `specifiedSections` parameter to return only the STANDARD section. If you need basic user information and group information, specify STANDARD and GROUPS.

In the `sections` parameter, specify one of the following enumeration options:

- **SECTIONS-ALL** – Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value. For example:

```
<urn:sections>SECTIONS-ALL</urn:sections>  
<urn:specifiedSections></urn:specifiedSections>
```

- **SECTIONS-NONE** – No sections are returned (only the Identifier element is returned). For example:

```
<urn:sections>SECTIONS-NONE</urn:sections>  
<urn:specifiedSections></urn:specifiedSections>
```



Note: The Identifier is always returned, regardless of the value or values specified in the sections parameter.

- **SECTIONS-SPECIFIED** – Returns sections that you specify. For example:

```
<urn:sections>SECTIONS-SPECIFIED</urn:sections>  
<urn:specifiedSections>SECTION:EXTENDED</urn:specifiedSections>
```

You can also use a comma-separated list in `specifiedSections` to return only the sections of a record you want. For example:

```
<urn:specifiedSections>SECTION:FIXED,SECTION:EXTENDED</urn:specifiedSections>
```

This ensures that only the fixed and extended sections of an item are returned. Below are the sections that you can specify for items:

- **SECTION:FIXED** – All parameters in `TTItem` (from `<urn:itemType>` to `<urn:url>`) prior to the `extendedField` parameter are returned.
- **SECTION:EXTENDED** – Returns all of the `extendedFields` in `TTItem`.
- **SECTION:ATTACHMENTS** – Returns all of the attachment sections of `TTItem`. You can return the next four sections simply by specifying:

```
<urn:specifiedSections>SECTION:ATTACHMENTS</urn:specifiedSections>
```

- **SECTION:NOTES** – Returns all note sections of `TTItem`.
- **SECTION:ITELINKS** – Returns all `itemLink` sections of `TTItem`.
- **SECTION:URLATTACHMENTS** – Returns all `urlAttachment` sections of `TTItem`.
- **SECTION:FILEATTACHMENTS** – Returns all `fileAttachment` sections of `TTItem`.

Below are the possible sections that you can specify for user records:

- **SECTION:STANDARD** – Returns parameters from `UserInfo` such as the `accessType`, e-mail address, contact, date and time information, phone number, locale, and the various display preferences.
- **SECTION:GROUPS** – Returns one or more `GroupIdentifiers` for each group to which the user belongs.
- **SECTION:SOLUTIONS** – Returns the `preferredSolution` and `solutionData` elements.



Note: If you specify `SECTION:NONE` after other sections, those preceding sections will not be returned. For example, `SECTION:FIXED,SECTION:NONE,SECTION:EXTENDED` will only return the `extendedField` sections. For the `GetUsers` call, `SECTION:STANDARD,SECTION:NONE,SECTION:GROUPS` will only return the `groups` section.

XML

The following XML shows `SectionsOption` in the `<urn:sections>` element of a typical call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:STANDARD</urn:specifiedSections>
```

```
</urn:limitedField>  
</urn:options>
```

UserResponseOptions

Description

UserResponseOptions holds the Options type, as well as an enumeration to determine if a service should stop on failure and send an error message or continue processing. It also enables you to limit the data that is returned in a response.

Parameters

Name	Type	Description
options	Extension. See Options [page 360] .	Options extension base. Holds a name value pairing for future elements.
multiOption	MultipleOption [page 356]	Enumeration element that holds the option to continue processing or stop when an error is encountered.
sections	SectionsOption [page 363]	Enumeration element that controls the sections of a user record that should be returned.
specifiedSections	string	If SECTIONS-SPECIFIED is used in the sections element above, enter the specified section or sections here. The available options are described below in the Usage section.

Usage

The UserResponseOptions contains the same functionality as MultipleOptions, but it also enables you to limit the return results based on sections of a user record.

You use the following parameters to control service handling and the amount of data that is returned in the response:

- **multiOption** – Use the multiOption element to specify whether the service should continue if an error is encountered, or stop and return an error. If any failures occur, each successive error message is appended to the string that is returned. Multiple error messages are separated by a single newline. If you specify CONTINUE-ON-FAILURE, then failures do not result in a return before all records have been processed. For more information, see [MultipleOption \[page 356\]](#).
- **sections** and **specifiedSections** – Use these elements to specify which parts of a user record should be returned in order to limit the amount of data that is returned. The sections that are not specified are not included in the response. For example, if you only need basic user information in the response, use the specifiedSections parameter to return only the STANDARD section. If you need basic user information and group information, specify STANDARD and GROUPS. For more information, see [SectionsOption \[page 363\]](#).

In the sections parameter, specify one of the following enumeration options:

- **SECTIONS-ALL** – Returns all sections. This is the default value for the sections argument. If no value is specified, ALL is the assumed value.
- **SECTIONS-NONE** – No sections are returned (only the UserIdentifier is returned). Note that the UserIdentifier is always returned, regardless of the value or values specified in the sections parameter.
- **SECTIONS-SPECIFIED** – Returns sections that you specify.

You can use a comma-separated list in specifiedSections to return only the sections of a user record that you want. For example:

```
<urn:specifiedSections>SECTION:STANDARD,SECTION:GROUPS</urn:specifiedSections>
```

This ensures that only the standard and groups sections of a user record are returned. Here are some of the possible sections you can specify:

- **SECTION:STANDARD** – Returns parameters from UserInfo such as the accessType, e-mail address, contact, date and time information, phone number, locale, and the various display preferences.
- **SECTION:GROUPS** – Returns one or more GroupIdentifiers for each group to which the user belongs.
- **SECTION:SOLUTIONS** – Returns the preferredSolution and solutionData elements.



Note: If you specify SECTION:NONE after other sections, those preceding sections will not be returned. For example, SECTION:STANDARD,SECTION:NONE,SECTION:GROUPS will only return the groups section.

XML

The following XML shows UserResponseOptions in the <urn:options> element of the GetUsers call.

```
<urn:options>
  <urn:extraOption>
    <urn:name></urn:name>
    <urn:value></urn:value>
  </urn:extraOption>
  <urn:multiOption>CONTINUE-ON-FAILURE</urn:multiOption>
  <urn:sections>SECTIONS-SPECIFIED</urn:sections>
  <urn:specifiedSections>SECTION:STANDARD</urn:specifiedSections>
</urn:options>
```

Responses

This section provides detailed descriptions of SBM Administrative Web service responses. The responses are the data elements that are returned from SBM Administrative Web service operations. The responses listed here contain one or more parameters, which make up the data being sent back from the Web service. The parameters listed in each

argument are either simple or complex types themselves. If the type is complex, a link to further detail of that type is provided in the **Type** column.

The following table lists all supported responses in alphabetical order, followed by a brief description of each type. Select a response to view detailed information including:

- **Description** – A brief description of the response.
- **Parameters** – A table that describes the simple and complex types for each response. For each complex type, click the type name for a detailed description.
- **Usage** – Any notes, additional details, and considerations are addressed here.
- **XML** – This section contains an example of the actual XML that is sent. The XML provides detailed examples of each element and shows you how to format the expected data.

List of Responses

Response	Description
GroupHolder [page 368]	Holds group information and any applicable error messages.
GroupMembersHolder [page 369]	Holds a group name and users that belong to that group.
GroupHolder [page 368]	Holds the name and additional information about a group.
NewUser [page 370]	Holds user information, a temporary password, and any applicable error messages that occurred while creating users.
Privilege [page 373]	Holds the name and other information about a privilege.
PrivilegeHolder [page 374]	Holds privilege information and any applicable error messages.
Privilege [page 373]	Holds the name and other information about a project.
RoleHolder [page 377]	Holds role information and any applicable error messages.
Status [page 378]	Holds status information for a Web service operation.
StatusEnum [page 379]	Indicates the type of status.

Response	Description
UserHolder [page 380]	Holds user information and any applicable error messages.

GroupHolder

Description

The GroupHolder type contains the GroupInfo response and any errors for group records that were not successfully returned. The GroupHolder type parameters are listed below.

Parameters

Name	Type	Description
group	GroupInfo [page 325]	The GroupInfo type holds the complete information that describes a group.
status	Status [page 378]	Holds status information for any messages or failures that are encountered.

Usage

The GroupHolder type holds detailed information for a group including the access type and status (whether it is marked as deleted or not). If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML snippet shows GroupHolder in the return element of the GetGroups response. Note that an error message is returned in this example (inside the `message` element). In this example, three groups were requested using the GetGroups call; however, the second group (CR Submitters) was not properly identified. Therefore, an error was returned for the second group, though the service continued to run and returned the third group (IDM Manager).

```
<ae:GetGroupsResponse>
  <ae:return>
    <ae:group>
      <ae:id xsi:type="ae:GroupIdentifier">
        <ae:displayName>IDM Team</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>634aed4a-bc98-49d3-86f0-6095c2f7b9b6</ae:uuid>
      </ae:id>
      <ae:accessType>ACCESS-USER</ae:accessType>
      <ae:memo/>
      <ae:isDeleted>>false</ae:isDeleted>
    </ae:group>
  </ae:return>
</ae:return>
```

```

<ae:status>
  <ae:status>IS-ERROR</ae:status>
  <ae:message>The specified group id or name 'CR Submitter'
  → does not exist.</ae:message>
</ae:status>
</ae:return>
<ae:return>
  <ae:group>
    <ae:id xsi:type="ae:GroupIdentifier">
      <ae:displayName>IDM Manager</ae:displayName>
      <ae:id>3</ae:id>
      <ae:uuid>b2654094-0ec6-460d-856b-9b72709d183b</ae:uuid>
    </ae:id>
    <ae:accessType>ACCESS-USER</ae:accessType>
    <ae:memo/>
    <ae:isDeleted>>false</ae:isDeleted>
  </ae:group>
</ae:return>
</ae:GetGroupsResponse>

```

GroupMembersHolder

Description

The GroupMembersHolder type contains the Group response and any errors for records that were not successfully returned. The GroupHolder type parameters are listed below.

Parameters

Name	Type	Description
group	GroupIdentifierEx [page 327]	Holds one or more group identifiers.
member	UserIdentifierEx [page 340]	Holds one or more user identifiers.
status	Status [page 378]	Holds status information for any messages or failures that are encountered.

Usage

The GroupHolder type holds information about a group and its respective members. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML snippet shows GroupMembersHolder in the return element of the GetGroupMembers response.

```

<ae:GetGroupMembersResponse>
  <ae:return>
    <ae:group>
      <ae:id xsi:type="ae:GroupIdentifier">
        <ae:displayName>IDM Manager</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>b2654094-0ec6-460d-856b-9b72709d183b</ae:uuid>
      </ae:id>
    </ae:group>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Joe Manager</ae:displayName>
        <ae:id>2</ae:id>
        <ae:uuid>85a33f0b-9542-43fe-90c1-e152eeee777f</ae:uuid>
      </ae:id>
    </ae:member>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Carmen Chief Officer</ae:displayName>
        <ae:id>10</ae:id>
        <ae:uuid>c4a1c377-569c-469a-913b-9e1e94e88f26</ae:uuid>
      </ae:id>
    </ae:member>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Zack IT Manager</ae:displayName>
        <ae:id>13</ae:id>
        <ae:uuid>6fe3057e-127d-4a67-b1bf-967bad1364d2</ae:uuid>
      </ae:id>
    </ae:member>
    <ae:member>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>Pam Doc Manager</ae:displayName>
        <ae:id>16</ae:id>
        <ae:uuid>ef8767f9-755d-46ba-bdd0-b720bfd4b468</ae:uuid>
      </ae:id>
    </ae:member>
  </ae:return>
</ae:GetGroupMembersResponse>

```

NewUser

Description

The NewUser type contains one or more new or existing users and errors for user records that were not successfully returned. The NewUser type parameters are listed below.

Parameters

Name	Type	Description
userHolder	UserHolder [page 380]	The userInfo type holds the complete information that describes a user.

Name	Type	Description
isNew	boolean	Specifies whether the user is new (true) or if it is an existing account that was updated (false).
temporaryPassword	string	Indicates the temporary password that has been established for the user.

Usage

The `NewUser` type holds detailed information for a new or existing user and his or her preferences, as well as the user's temporary password. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML snippet shows `NewUser` in the return element of the `CreateUsers` response. Note that an error message is returned in this example (inside the `message` element). In this example, three users were created; however, the second user (`Johnny_Doe`) was not properly identified (no login ID was specified). Therefore, an error was returned for the second user, though the service continued to run and created the third user (`Jane_Doe`).

```
<ae:CreateUsersResponse>
  <ae:return>
    <ae:userHolder>
      <ae:user>
        <ae:id xsi:type="ae:UserIdentifier">
          <ae:displayName>John_Doe</ae:displayName>
          <ae:id>47</ae:id>
          <ae:uuid>893de970-fafa-4907-84d3-50e7b82fcaaa</ae:uuid>
          <ae:loginId>J_Doe</ae:loginId>
        </ae:id>
        <ae:accessType>ACCESS-USER</ae:accessType>
        <ae:email>johndoe@companyName.com</ae:email>
        <ae:emailCC/>
        <ae:timezone/>
        <ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
        <ae:dstSavings>3600000</ae:dstSavings>
        <ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
        <ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
        <ae:namespaceName>00000</ae:namespaceName>
        <ae:phoneNumber/>
        <ae:locale>en_US</ae:locale>
        <ae:isDeleted>>false</ae:isDeleted>
        <ae:maxNotes>10</ae:maxNotes>
        <ae:maxChangeHistory>10</ae:maxChangeHistory>
        <ae:maxItemsPerPage>20</ae:maxItemsPerPage>
        <ae:fieldsMask>1</ae:fieldsMask>
        <ae:notesMask>4</ae:notesMask>
        <ae:changeHistoryMask>4</ae:changeHistoryMask>
        <ae:browserMask>1052724</ae:browserMask>
        <ae:preferredSolution xsi:type="ae:SolutionIdentifier">
          <ae:id>-1</ae:id>
```

```
        </ae:preferredSolution>
    </ae:user>
</ae:userHolder>
    <ae:isNew>true</ae:isNew>
    <ae:temporaryPassword>WSNP</ae:temporaryPassword>
</ae:return>
<ae:return>
    <ae:userHolder>
        <ae:status>
            <ae:status>IS-ERROR</ae:status>
            <ae:message>Create user requires a user login id.</ae:message>
        </ae:status>
    </ae:userHolder>
    <ae:isNew>false</ae:isNew>
</ae:return>
<ae:return>
    <ae:userHolder>
        <ae:user>
            <ae:id xsi:type="ae:UserIdentifier">
                <ae:displayName>Jane_Doe</ae:displayName>
                <ae:id>48</ae:id>
                <ae:uuid>5d7bd7a7-bae0-467d-9e71-9390f0932541</ae:uuid>
                <ae:loginId>Ja_Doe</ae:loginId>
            </ae:id>
            <ae:accessType>ACCESS-USER</ae:accessType>
            <ae:email>jadoc@companyName.com</ae:email>
            <ae:emailCC/>
            <ae:timezone/>
            <ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
            <ae:dstSavings>3600000</ae:dstSavings>
            <ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
            <ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
            <ae:namespaceName>00000</ae:namespaceName>
            <ae:phoneNumber/>
            <ae:locale>en_US</ae:locale>
            <ae:isDeleted>false</ae:isDeleted>
            <ae:maxNotes>10</ae:maxNotes>
            <ae:maxChangeHistory>10</ae:maxChangeHistory>
            <ae:maxItemsPerPage>20</ae:maxItemsPerPage>
            <ae:fieldsMask>1</ae:fieldsMask>
            <ae:notesMask>4</ae:notesMask>
            <ae:changeHistoryMask>4</ae:changeHistoryMask>
            <ae:browserMask>1052724</ae:browserMask>
            <ae:preferredSolution xsi:type="ae:SolutionIdentifier">
                <ae:id>-1</ae:id>
            </ae:preferredSolution>
        </ae:user>
    </ae:userHolder>
    <ae:isNew>true</ae:isNew>
    <ae:temporaryPassword>VWWR</ae:temporaryPassword>
</ae:return>
</ae:CreateUsersResponse>
```

Privilege

Description

The Privilege type holds the name and other information about a privilege in SBM. The Privilege type parameters are listed below.

Parameters

Name	Type	Description
name	string	The name of the privilege.
objectUUID	string	The UUID of the object to which the privilege applies. May be set to null if not scoped to an object. May return the ID and not UUID in some cases.
type	string	The type of privilege. See below.

Usage

The Privilege type completely describes an available privilege in SBM. Use [GetUserPrivileges \[page 289\]](#) to retrieve a list of privileges available for a specified user.

The available privilege types for a normal user are:

TS_PRIVTYPE_USERSYS
TS_PRIVTYPE_USERPRJ
TS_PRIVTYPE_USERWKF
TS_PRIVTYPE_USERFLD
TS_PRIVTYPE_USERTBL

The available privilege types for an administrator are:

TS_PRIVTYPE_ADMSYS
TS_PRIVTYPE_ADMPRJ
TS_PRIVTYPE_ADMWKF
TS_PRIVTYPE_ADMFLD_PRJ
TS_PRIVTYPE_ADMFLD_WKF
TS_PRIVTYPE_ADMCON

TS_FLDPRIVTYPE_ADMFLD

TS_FLDPRIVTYPE_ADMGRP

TS_FLDPRIVTYPE_ADMTBL

XML

The following XML snippet shows the Privilege type in the return element of the GetUserPrivileges response.

```
<ae:GetUserPrivilegesResponse>
  <ae:return>
    <ae:name>TS_ADMPRJPRIV_ADDPROJECT</ae:name>
    <ae:objectUUID>ROOTPROJECT</ae:objectUUID>
    <ae:type>TS_PRIVTYPE_ADMPRJ</ae:type>
  </ae:return>
  <ae:return>
    <ae:name>TS_ADMPRJPRIV_EDITPROJECT</ae:name>
    <ae:objectUUID>ROOTPROJECT</ae:objectUUID>
    <ae:type>TS_PRIVTYPE_ADMPRJ</ae:type>
  </ae:return>
  <ae:return>
    <ae:name>TS_ADMPRJPRIV_DELETEPROJECT</ae:name>
    <ae:objectUUID>ROOTPROJECT</ae:objectUUID>
    <ae:type>TS_PRIVTYPE_ADMPRJ</ae:type>
  </ae:return>
  <ae:return>
    <ae:name>TS_ADMPRJPRIV_ASSIGNPROJECTPRIVS</ae:name>
    <ae:objectUUID>ROOTPROJECT</ae:objectUUID>
    <ae:type>TS_PRIVTYPE_ADMPRJ</ae:type>
  </ae:return>
  <ae:return>
    <ae:name>TS_ADMPRJPRIV_ADDPROJECT</ae:name>
    <ae:objectUUID>1bb8e27a-3156-49e6-8257-f7379e6aa498</ae:objectUUID>
    <ae:type>TS_PRIVTYPE_ADMPRJ</ae:type>
  </ae:return>
</ae:GetUserPrivilegesResponse>
```

PrivilegeHolder

Description

The PrivilegeHolder type contains the PrivilegeInfo response and any errors for privileges that were not successfully returned. The PrivilegeHolder type parameters are listed below.

Parameters

Name	Type	Description
privilege	PrivilegeInfo [page 360]	Holds complete information about a privilege.

Name	Type	Description
access	Status [page 378]	Holds status information for any messages or failures that are encountered.

Usage

The PrivilegeHolder type returns detailed information for privileges from the SetGroupPrivileges and SetUserPrivileges calls. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML shows PrivilegeHolder as seen in the <ae:privilege> element in a response.

```

<ae:privilege>
  <ae:privilegeId>
    <ae:name>TS_USRPRJPRIV_DELETE</ae:name>
    <ae:type>TS_PRIVTYPE_USERPRJ</ae:type>
  </ae:privilegeId>
  <ae:access>GRANTED</ae:access>
  <ae:objectId>
    <ae:displayName>IM Project</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>86ea7399-d634-451b-9de9-91bb30d67c1b</ae:uuid>
  </ae:objectId>
</ae:privilege>

```

ProjectGeneralData

Description

The ProjectGeneralData type holds the name and other information about a project in SBM. The ProjectGeneralData type parameters are listed below.

Parameters

Name	Type	Description
project	ProjectIdentifier [page 332]	Specifies the project that is created.
parentProject	ProjectIdentifier [page 332]	Specifies the new project's parent project.
workflow	WorkflowIdentifier [page 350]	Specifies the new project's parent workflow.

Name	Type	Description
useParentProjectWorkflow	boolean	Determines if the project uses the parent project's workflow. Default is true if parent is not Base Project. Default is false if parent is Base Project.
projectSequence	integer	Indicates the sequence of the project in the order of siblings.
allowSubmit	boolean	Indicates whether or not the project allows items to be submitted.
useParentSequenceNumbers	boolean	Determines if items submitted to the new project are numbered in sequence with items in the parent project. False means the new project will number its items independently of items in the parent project. Default is true .
lastItemSequenceNumber	integer	The next item submitted to the new project will be numbered one greater than this number. 0 means the first item will be numbered 1. Default is 0 . Ignored if useParentSequenceNumbers is true.
zeroToFill	integer	Zero-fill item numbers within the project to a certain number of digits. For example, 5 would fill to five digits: 00001. Default is 5 . Ignored if useParentSequenceNumbers is true.
allowAnonymousSubmit	boolean	Indicates whether or not the project allows items to be submitted anonymously.
altName	string	Alternate project name to display to users who do not have view privileges on the project. Default is same as projectName.

Name	Type	Description
description	string	The description of the project. Derived from the TS_DESCRIPTION column in TS_PROJECTS.

Usage

The ProjectGeneralData type holds information that completely describes a project that you create using CreateProject. For more information, see [CreateProject \[page 265\]](#).

XML

The following XML snippet shows the ProjectGeneralData type in the return element of the CreateProject response.

```

<ae:return>
  <ae:project xsi:type="ae:ProjectIdentifier">
    <ae:displayName/>
    <ae:id>0</ae:id>
    <ae:uuid/>
    <ae:fullyQualifiedName/>
    <ae:internalName/>
  </ae:project>
  <ae:parentProject xsi:type="ae:ProjectIdentifier">
    <ae:displayName>Base Project</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>ROOTPROJECT</ae:uuid>
    <ae:fullyQualifiedName>Base Project</ae:fullyQualifiedName>
    <ae:internalName>BASE_PROJECT</ae:internalName>
  </ae:parentProject>
  <ae:workflow xsi:type="ae:WorkflowIdentifier">
    <ae:displayName>Base Workflow</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>BASEWORKFLOW</ae:uuid>
  </ae:workflow>
  <ae:useParentProjectWorkflow>true</ae:useParentProjectWorkflow>
  <ae:projectSequence>2001</ae:projectSequence>
  <ae:allowSubmit>true</ae:allowSubmit>
  <ae:useParentSequenceNumbers>true</ae:useParentSequenceNumbers>
  <ae:lastItemSequenceNumber>0</ae:lastItemSequenceNumber>
  <ae:zeroFillTo>5</ae:zeroFillTo>
  <ae:allowAnonymousSubmit>false</ae:allowAnonymousSubmit>
  <ae:altName>New Project</ae:altName>
  <ae:description/>
</ae:return>

```

RoleHolder

Description

The RoleHolder type contains the RoleInfo response and any errors for roles that were not successfully returned. The RoleHolder type parameters are listed below.

Parameters

Name	Type	Description
role	RoleInfo [page 178]	Holds complete information about a role.
access	Status [page 229]	Holds status information for any messages or failures that are encountered.

Usage

The RoleHolder type returns detailed information for roles from the GetUserRoles, GetGroupRoles, SetGroupRoles, and SetUserRoles calls. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML shows RoleHolder as seen in the `<ae:role>` element in a response.

```
<ae:role>
  <ae:id xsi:type="ae:RoleIdentifier">
    <ae:displayName>IDM Team</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>a59d7c1d-1f5e-4f0f-b906-41eb234721ae</ae:uuid>
    <ae:projectId xsi:type="ae:ProjectIdentifier">
      <ae:displayName>IDM Project</ae:displayName>
      <ae:id>2</ae:id>
      <ae:uuid>0b87f347-a00c-4359-9c16-625e847bfdab</ae:uuid>
    </ae:projectId>
  </ae:id>
  <ae:access>GRANTED</ae:access>
  <ae:extendedData>
    <ae:data>
      <ae:name>inheritedFrom</ae:name>
      <ae:value>IDM View Only (Group)</ae:value>
    </ae:data>
  </ae:extendedData>
</ae:role>
```

Status

Description

The Status type holds status information for a Web service operation. The Status type parameters are listed below.

Parameters

Name	Type	Description
status	StatusEnum [page 379] .	Status enumeration that indicates whether the message is a warning message, informational message, or error message.

Name	Type	Description
code	string	The message code that is returned.
message	string	The message string that is returned.

Usage

The Status type is used to return status messages from service operations.

XML

The following XML shows Status as seen in the return element of a GetGroups call that did not include the group name.

```
<ae:return>
  <ae:status>
    <ae:status>IS-ERROR</ae:status>
    <ae:message>A group name must be specified to create a new group.</ae:message>
  </ae:status>
</ae:return>
```

StatusEnum

Description

StatusEnum indicates the type of message that is returned in the Status response.

Parameters

Name	Type	Description
IS-WARNING	string	Indicates a warning message.
IS-INFORMATION	string	Indicates an informational message.
IS-ERROR	string	Indicates an error message.

Usage

None.

XML

The following XML shows StatusEnum in the `<ae:status>` return element of a typical response.

```
<ae:return>
  <ae:status>
    <ae:status>IS-ERROR</ae:status>
    <ae:message>Invalid project 0.</ae:message>
  </ae:status>
</ae:return>
```

UserHolder

Description

The UserHolder type contains the UserInfo response and any errors for user records that were not successfully returned. The UserHolder type parameters are listed below.

Parameters

Name	Type	Description
user	UserInfo [page 341]	The userInfo type holds the complete information that describes a user.
status	Status [page 378]	Holds status information for any messages or failures that are encountered.

Usage

The UserHolder type holds detailed information for a user and his or her preferences. If any errors occur during the call, they are returned in the status element in the order in which they were processed.

XML

The following XML snippet shows UserHolder in the `<ae:user>` return element of the UpdateUsers response. Note that an error message is returned in this example (inside the `message` element). In this example, three users were updated using the UpdateUsers call; however, the second user (Kathy) was not properly identified. Therefore, an error was returned for the second user, though the service continued to run and returned the third user (Laura).

```
<ae:UpdateUsersResponse>
  <ae:return>
    <ae:user>
      <ae:id xsi:type="ae:UserIdentifier">
        <ae:displayName>John Support Manager</ae:displayName>
        <ae:id>21</ae:id>
        <ae:uuid>08784a43-970f-4d28-9a6e-c301077ca653</ae:uuid>
        <ae:loginId>john</ae:loginId>
      </ae:id>
      <ae:accessType>ACCESS-USER</ae:accessType>
      <ae:email>john@companyName.com</ae:email>
      <ae:emailCC/>
      <ae:timezone/>
      <ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
      <ae:dstSavings>3600000</ae:dstSavings>
      <ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
      <ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
      <ae:namespaceName>00000</ae:namespaceName>
      <ae:phoneNumber/>
      <ae:locale>en_US</ae:locale>
      <ae:isDeleted>>false</ae:isDeleted>
    </ae:user>
  </ae:return>
</ae:UpdateUsersResponse>
```

```

<ae:maxNotes>10</ae:maxNotes>
<ae:maxChangeHistory>10</ae:maxChangeHistory>
<ae:maxItemsPerPage>20</ae:maxItemsPerPage>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>Everyone</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>ade39c21-e7b2-4dcb-a231-d3d872671b59</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IDM View Only</ae:displayName>
  <ae:id>5</ae:id>
  <ae:uuid>af38532d-e79c-495f-a3e6-f4bf784cc492</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Technician</ae:displayName>
  <ae:id>6</ae:id>
  <ae:uuid>902a1300-6ae1-44d7-b46a-e420babe8497</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Manager</ae:displayName>
  <ae:id>7</ae:id>
  <ae:uuid>b70af5de-6642-4228-b9bb-d0da59bb6909</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IM Administrator</ae:displayName>
  <ae:id>8</ae:id>
  <ae:uuid>b77b6e9d-e75a-4841-be1b-9c358affb797</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Approval Board Members</ae:displayName>
  <ae:id>13</ae:id>
  <ae:uuid>ea167b8c-e9ea-4196-9727-dfd2f10fd751</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Submitters</ae:displayName>
  <ae:id>11</ae:id>
  <ae:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</ae:uuid>
</ae:group>
<ae:fieldsMask>1</ae:fieldsMask>
<ae:notesMask>4</ae:notesMask>
<ae:changeHistoryMask>4</ae:changeHistoryMask>
<ae:browserMask>13635632</ae:browserMask>
<ae:preferredSolution xsi:type="ae:SolutionIdentifier">
  <ae:displayName>Incident Management</ae:displayName>
  <ae:id>2</ae:id>
  <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
  <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
  <ae:tabName>Incident Mgmt</ae:tabName>
</ae:preferredSolution>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Incident Management</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
    <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>

```

```

        <ae:tabName>Incident Mgmt</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Trend Of Incidents Closed On Initial Call</ae:displayName>
        <ae:id>38</ae:id>
        <ae:uuid>f8a5ce79-4b40-45cf-9f6d-735d060e90de</ae:uuid>
    </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Change Request Management</ae:displayName>
        <ae:id>3</ae:id>
        <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
        <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
        <ae:tabName>Change Requests</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
        <ae:id>-6</ae:id>
        <ae:uuid>-6</ae:uuid>
    </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
    <ae:solution xsi:type="ae:SolutionIdentifier">
        <ae:displayName>Issue Defect Management</ae:displayName>
        <ae:id>1</ae:id>
        <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
        <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
        <ae:tabName>IDM</ae:tabName>
    </ae:solution>
    <ae:homeReport xsi:type="ae:ReportIdentifier">
        <ae:displayName>Built-In: All Active Items I Own</ae:displayName>
        <ae:id>-6</ae:id>
        <ae:uuid>-6</ae:uuid>
    </ae:homeReport>
</ae:solutionData>
</ae:user>
</ae:return>
<ae:return>
    <ae:status>
        <ae:status>IS-ERROR</ae:status>
        <ae:message>Invalid user Kath.</ae:message>
    </ae:status>
</ae:return>
<ae:return>
    <ae:user>
        <ae:id xsi:type="ae:UserIdentifier">
            <ae:displayName>Laura Engineer</ae:displayName>
            <ae:id>5</ae:id>
            <ae:uuid>e0538593-21aa-4ca5-a229-473563c21470</ae:uuid>
            <ae:loginId>laura</ae:loginId>
        </ae:id>
        <ae:accessType>ACCESS-USER</ae:accessType>
        <ae:email>laura@companyName.com</ae:email>
        <ae:emailCC/>
    </ae:user>
</ae:return>

```

```
<ae:timezone/>
<ae:offsetFromGMT>-25200000</ae:offsetFromGMT>
<ae:dstSavings>3600000</ae:dstSavings>
<ae:datePreference>DATE-FORMAT-FROM-LOCALE</ae:datePreference>
<ae:timePreference>TIME-FORMAT-12HOUR</ae:timePreference>
<ae:namespaceName>00000</ae:namespaceName>
<ae:phoneNumber/>
<ae:locale>en_US</ae:locale>
<ae:isDeleted>false</ae:isDeleted>
<ae:maxNotes>10</ae:maxNotes>
<ae:maxChangeHistory>10</ae:maxChangeHistory>
<ae:maxItemsPerPage>20</ae:maxItemsPerPage>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>Everyone</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>ade39c21-e7b2-4dcb-a231-d3d872671b59</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>IDM Team</ae:displayName>
  <ae:id>2</ae:id>
  <ae:uuid>634aed4a-bc98-49d3-86f0-6095c2f7b9b6</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Technical Analysts</ae:displayName>
  <ae:id>12</ae:id>
  <ae:uuid>661c1c5b-2e1d-4ad1-9d43-60a3dad6f931</ae:uuid>
</ae:group>
<ae:group xsi:type="ae:GroupIdentifier">
  <ae:displayName>CR Submitters</ae:displayName>
  <ae:id>11</ae:id>
  <ae:uuid>cf83a358-d7fb-4b96-8f98-ed532c66cd0a</ae:uuid>
</ae:group>
<ae:fieldsMask>1</ae:fieldsMask>
<ae:notesMask>4</ae:notesMask>
<ae:changeHistoryMask>4</ae:changeHistoryMask>
<ae:browserMask>13635632</ae:browserMask>
<ae:preferredSolution xsi:type="ae:SolutionIdentifier">
  <ae:displayName>Issue Defect Management</ae:displayName>
  <ae:id>1</ae:id>
  <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
  <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
  <ae:tabName>IDM</ae:tabName>
</ae:preferredSolution>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Issue Defect Management</ae:displayName>
    <ae:id>1</ae:id>
    <ae:uuid>cea0a86c-5d74-4e12-b8d6-9d6b90186f1e</ae:uuid>
    <ae:uniqueName>ISSUE_DEFECT_MANAGEMENT</ae:uniqueName>
    <ae:tabName>IDM</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>My In Box</ae:displayName>
    <ae:id>54</ae:id>
    <ae:uuid>034982d7-822e-421e-88cf-1fe2cb436785</ae:uuid>
```

```
    </ae:homeReport>
  </ae:solutionData>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Incident Management</ae:displayName>
    <ae:id>2</ae:id>
    <ae:uuid>c6f06a70-4d06-42a4-a3a9-50b2120dca41</ae:uuid>
    <ae:uniqueName>INCIDENT_MANAGEMENT</ae:uniqueName>
    <ae:tabName>Incident Mgmt</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
    <ae:id>-11</ae:id>
    <ae:uuid>-11</ae:uuid>
  </ae:homeReport>
</ae:solutionData>
<ae:solutionData>
  <ae:solution xsi:type="ae:SolutionIdentifier">
    <ae:displayName>Change Request Management</ae:displayName>
    <ae:id>3</ae:id>
    <ae:uuid>0ea28a74-6dde-406f-b19a-4c45aec40294</ae:uuid>
    <ae:uniqueName>CHANGE_REQUEST_MANAGEMENT</ae:uniqueName>
    <ae:tabName>Change Requests</ae:tabName>
  </ae:solution>
  <ae:homeReport xsi:type="ae:ReportIdentifier">
    <ae:displayName>Built-In: All Items I Submitted</ae:displayName>
    <ae:id>-11</ae:id>
    <ae:uuid>-11</ae:uuid>
  </ae:homeReport>
</ae:solutionData>
</ae:user>
</ae:return>
</ae:UpdateUsersResponse>
```

Chapter 4: Tips for Writing Applications

This section provides guidelines for getting started writing applications that interact with the SBM Web services.

- [Authentication Methods \[page 385\]](#)
- [C++ Constants \[page 385\]](#)
- [Supported Character Encoding \[page 386\]](#)
- [Supported Date/Time Formats \[page 386\]](#)
- [Application, Table, and Project IDs \[page 387\]](#)

Authentication Methods

The SBM Web services API supports the following authentication methods. Choose the method most appropriate for your environment. Use of SSL is recommended with any of these authentication methods.

Argument

By default, the SBM Web services use the argument method of authentication. Authentication occurs each time a method is called. The Auth argument passes the SBM user ID and password in plain text. You can also use this argument to specify the host name for licensing purposes, instead of using the client's IP address.

HTTP Basic

HTTP Basic authentication is defined in the HTTP header. The SBM user ID and password are passed with Base64 encoding.

To define HTTP Basic authentication in Visual Studio .NET, add an authorization header to the request. Typically you do this by overriding the `GetWebRequest` method. In the sample programs, you can use the `-basic` command-line argument to do this.

WS-Security

WS-Security (Web Services Security) authentication creates a security token in the SOAP header. The SBM credentials are passed as a Username token and a Base64-encoded password.

To define WS-Security in Visual Studio .NET, add a Username token to the SOAP header, which contains the plain text user ID and the Base64-encoded password.

C++ Constants

For reference, SBM provides constants in C++ format. You can find these constants in the `TSDef.h` file, located in the SBM API package (`tsapi.zip`).

For information on the SBM database, see the `schema.doc` file, also located in the API package.

Supported Character Encoding

The SBM Web services use UTF-8 encoding. Single-byte characters are automatically supported with UTF-8. To enable support for multi-byte characters, you must set the expected encoding to UTF-8 on the client side. In Visual Studio 2005 C#, you can do this by overriding the `GetReaderFromMessage` method and setting the reader's encoding to UTF-8.

Supported Date/Time Formats

SBM uses the ICU (International Components for Unicode) library (version 3.6) for date/time support. The SBM *Date/Time* field values are strings and must be in XML date/time format. The value is expected to be in coordinated universal time (UTC). Below are four examples of date/time strings that you can send to the SBM Web services:

#	Example	Explanation
1	2006-04-28	No offset from 00:00:00, April 28, 2006 — or — 2006-04-28T00:00:00+00:00
2	2006-04-28T13:20-6:00	6-hour offset from 1:20:00 p.m., April 28, 2006 — or — 2006-04-28T19:20:00+00:00
3	2006-04-28T19:20:30+0:00	No offset from 7:20:30 p.m., April 28, 2006
4	2006-04-28T13:20:30.45-6:00	6-hour offset from 1:20:30 p.m., April 28, 2006 — or — 2006-04-28T19:20:30+00:00

If you use the format shown in example 1, the SBM Web services return *Date Only* field values in the same format. If you use the formats shown in examples 2, 3, or 4, the SBM Web services return *Date/Time* field values in the same format as example 3.



Note: SBM does not currently store the fractions of a second when the format in example four is used.

Web service date/time values that are sent with milliseconds must be 29 characters in length. For example, `2006-04-28T13:20:30.45-6:00` results in an invalid value response; however, `2006-04-28T13:20:30.450-06:00` is accepted. Therefore, specify the value with milliseconds in exactly 29 characters or remove the milliseconds from the value (`2006-04-28T13:20:30-6:00`).

The SBM Web services API has two special system *Date/Time* fields, `item.createDate` and `item.modifiedDate`, which have values in seconds since January 1, 1970 (Unix time). These fields are automatically populated by SBM and it is recommended that you do not modify them. SOAP will convert these values to its `dateTime` format for transport in XML.

You can explicitly set these values as shown in the following C# example code:

```
string MyString = "Jan 1, 2006 12:12:12 am";

DateTime MyDateTime = DateTime.Parse(MyString);

web.TTItem item = new web.TTItem();

item.createDate = MyDateTime;

item.modifiedDate = MyDateTime;
```

Application, Table, and Project IDs

The `GetSolutions`, `GetTables`, and `GetSubmitProjects` methods are a useful starting point to retrieve IDs of applications, tables, and projects. These IDs are required when you use certain methods, such as `CreatePrimaryItem` and `DeleteItem`.

Chapter 5: Sample Programs

- [About the Sample Programs \[page 389\]](#)
- [Using the Sample Programs \[page 391\]](#)

About the Sample Programs

SBM provides seven sample program source files that you can use with the SBM sample database. Use these programs to see functional examples of C# source code for applications that interact with SBM Web services. You can find these samples in your installation under `Application Engine\webservices\samples`.

The samples include:

- [Solutions and Tables \[page 389\]](#)
- [CreateItems \[page 390\]](#)
- [DeleteItems \[page 390\]](#)
- [GetItems \[page 390\]](#)
- [Reports \[page 390\]](#)
- [UpdateItems \[page 390\]](#)
- [Users and Groups \[page 391\]](#)



Important: Support for development efforts writing Web services is provided by Professional Services. Questions regarding use of Web services operations in orchestration processes as documented are handled by customer support.

Solutions and Tables

Demonstrates returning a list of applications, tables, and projects.

This program:

1. Returns the applications for which the user has permissions.
2. Returns the tables and fields for the Issue Defect Management application.
3. Returns all auxiliary tables and fields.
4. Returns all primary tables and fields.
5. Returns the tables and fields for which the user has permissions.
6. Returns the projects for which the user has submit permissions for the Issues table.
7. Returns the projects for which the user has submit permissions.

CreateItems

Demonstrates submitting items into a specified SBM project, and creating auxiliary items within a specified table.

This program:

1. Creates items in the Contacts auxiliary table.
2. Creates items in the Image Builder project.

DeleteItems

Demonstrates deleting specified items.

This program:

1. Creates an item in the Image Builder project and then deletes the item.
2. Creates two items in the Image Builder project and then deletes the items.
3. Creates two items in the Image Builder project and then deletes the item using a query string.

GetItems

Demonstrates returning items based on user privileges.

This program:

1. Returns all items from the Issues table.
2. Deals with file attachments on an item.

Reports

Demonstrates getting and executing reports.

This program:

1. Gets all built-in reports.
2. Gets all reports that were created by Joe.
3. Gets three reports from the IDM application that were created by Joe.
4. Executes the "All Active Escalated Incidents" report by report name and returns all items.
5. Executes the "All Issues I Own" report by UUID and returns four items.
6. Executes the "Built-In: All Inactive Items" built-in report in the Incident Management application and returns all items.

UpdateItems

Demonstrates updating item fields and updating items using a specified transition.

This program:

1. Creates an item in the Image Builder project.
2. Updates the title and description of the item.
3. Updates the item using the transition ID 0.
4. Creates two more items in the Image Builder project.
5. Updates the two items.

Users and Groups

Demonstrates getting, updating, and creating users and groups.

This program:

1. Gets users and groups.
2. Updates a user and a group.
3. Creates a user and a group.
4. Marks a user and a group as deleted.

Using the Sample Programs

The following sections discuss the requirements for using the sample programs and what you should modify in the programs:

- [Requirements \[page 391\]](#)
- [Choosing Authentication \[page 392\]](#)
- [Editing the Web Services URL \[page 392\]](#)
- [Rebuilding the Executables \[page 392\]](#)

Requirements

You must have the following installed:

- SBM 2009 R1 or later, connected to the sample database
- One of the following:
 - Microsoft Visual Studio .NET 2005
- For use with WS-Security authentication (optional):
 - WSE 3.0 (download from [here](#)).



Note: Later versions of Visual Studio may be used; however, WSE is not supported in later versions, so the WSE specific code must be removed or replaced with Windows Communication Foundation (WCF) code. This only applicable when WS-Security authentication is used.

Choosing Authentication

By default, the samples use the argument method for authentication. You can change the authentication method to HTTP Basic by using the `-basic` command-line argument. For a description of the authentication methods, see [Authentication Methods \[page 385\]](#).

Editing the Web Services URL

By default, the SBM Web services URL points to a server called `localhost:80`. To point to your actual server, locate the following files in each sample program directory:

- `Sample*.cs`

Change the server name and port number in this line:

```
sbmserv.Url = "http://serverName:aePort/gsoap/gsoap_ssl.dll?sbmappservices72";
```

The port number can be changed from the default value of 80 using the `- port` argument.

Rebuilding the Executables

The sample programs include pre-built executables. If you have changed the Web services URL or the authentication method, rebuild the solution and use the new executables.

You can find the executables in the `bin\release` folder.